

Reflection Reframed:
The Process of Photography as Strategy for Teachers' Reflective Practice

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Abstract

Teacher reflective practice is described as an effective method for engaging teachers in improving their own professional learning. Yet, some teachers do not understand how to effectively engage in the reflective processes, or prefer not to formalize the process through writing a reflective journal as taught in most teacher education programs. Developing reflective skills through the process of photography was investigated in this study as a strategy to allow enhanced teacher reflection for professional and personal growth. The process of photography is understood as the *mindful* act of photographing rather than focusing on the final product—the image. For this study, 3 practicing educators engaged in photographic exercises as a reflective process. Data sources included transcribed interviews, participant journal reflections, and sketchbook artifacts, as well as the researcher's personal journal notes. Findings indicated that, through the photographic process, (a) teacher participants developed new and individual strategies for professional learning; and (b) teacher participants experienced shifts in the way they conceptualized their personal worldviews.

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CHAPTER ONE: INTRODUCTION

In *The Courage to Teach*, Parker J. Palmer (1998) states that “You teach who you are” (p. 9). Assuming that Palmer is correct, knowing who you are is paramount, especially for teachers in the field of education. Velde, Wittman, Carawan, Knight, and Pokorny (2010), in turn, ask the question, “Who am I as a teacher?” They observed, “Our study emphasized the lived experience of teaching and identifies what we may take for granted and what we do not yet understand about our own teaching” (p. 49). Upon further investigation, Velde et al. explained how complicated a simple statement of *who* you are as a teacher can be. They discovered that teachers equate: *Who am I?* with *What do I have to do?* Teachers describe *who I am* by stating, “As a teacher, I struggle to keep up to date in my discipline. I face significant risk of becoming rusty in an age of exploding knowledge and ever-changing technical skill” (Velde et al., p. 51).

What action can teachers take to help support their personal and professional goals? Some educators have found that their practice has been supported by the exploration and implementation of reflective practice (Connelly & Clandinin, 1988; Dewey, 1933; Knowles, 1993; Schön, 1983), which is often described as a strategy or plan of action in which teachers evaluate and gain insight into their abilities, strengths, and skills by reviewing their individual teaching experiences. However, for reflection to become an effective form of enhancing teacher practice, McIntosh (2010) warns teachers who employ reflective practice that they “can become mechanistic in their use unless fresh creative approaches are employed” (p. 43). Employing multiple strategies for reflective practice may be helpful in retaining interest, both for the practitioner and the student (Connelly & Clandinin, 1988).

One alternative strategy, which forms the basis of this study, is the use of the photographic process to enhance professional learning. One example is teacher reflective practice. The process of photography can be understood as the *mindful* act of photographing or the making of photographic images (Gross & Shapiro, 2001). Reflective practice is one among numerous strategies taught in teacher education programs that can help “represent, examine, and communicate emerging understandings with others and with self” (Whiting, 1979, p. 28). Teachers are taught to reflect on the past and find solutions to problems in teaching practice by examining recent teaching experiences.

As well, teachers use reflective strategies for professional and personal development, which assists teachers in avoiding the “risk of becoming rusty” (Velde et al., 2010, p. 51). Bringing new life and creativity into my practice has been invaluable to my work as a practicing professional photographer and a teacher of photography. One strategy for professional learning that I found personally useful in keeping my practice new and fresh is the process, or act of photographing. Miholic (1998a) describes how the camera creates “a heightened sense of awareness, the environment and the sense of self within the environment is enhanced” (p. 3). Using this “heightened sense of my surroundings” often leads me to a deeper understanding of my environment in ways not evident before I examined the situation through the lens of my camera (Miholic, 1998a p.3). Cobley and Haeffner (2009) suggest this phenomenon is the ability of the camera to “teach, facilitate or otherwise enhance visual literacy” (p. 125). The proliferation of photographic images in our culture is testament to the popularity and accessibility of the digital camera. With that in mind, it stands to reason that the use of the photographic process needs to be investigated as a tool that may be helpful in professional learning.

Research Focus Statement

Therefore, the focus of this inquiry was to determine if the process of photography as a strategy for reflective practice enhances teachers' perceptions about their own professional learning. The process of photography is defined as the deliberateness of the act of photographing (Gross & Shapiro, 2001). "The camera becomes a mind-guided tool that mediates between the intention and the action of taking a photograph" (Whiting, 1979, p. 28). This mind-set is referred to as "picture-thinking"; the person taking the photograph, then, "first learns to see with [the] camera and think with the eyes" (Whiting, p. 34).

Making a distinction between the *process* (the act) of photography from the *product* (the image) that is produced may present a challenge to some readers because the word "photography" means different things to different people. Yet, it is the same distinction made between the act of learning (process) and the act of expressing (product) that learning (Gross & Shapiro, 2001).

The process of photography, or the act of thinking with the eyes (Whiting, 1979), is sometimes taken for granted because the accessibility of the primary instrument that creates images, the digital camera, is familiar, and "the act of seeing tends to make it seem simple and self-evident" (Bode, 1929, p. 240). Could teachers use this process to more closely examine their own teaching practice?

Justification for the Research Focus

In light of the challenges to educators, such as governmental directives, administrative intervention, societal demands, and the pressures of family life, Day (1999) asks a very poignant question: "Why would a teacher, given all the complexities

of teaching, embark upon this journey of reflection?” (p. 215). Teaching today is far from being a straightforward process. As Day argues, professional and personal development must occur throughout a teacher’s entire career in order to endure the challenges of today. Facing these challenges involves innumerable complexities and a multitude of strategies, not to mention social and individual dynamics that are not readily quantifiable (Verloop, Van Driel, & Meijer, 2001).

Teachers have found support for their practice by exploring and implementing strategies that enhance reflective practice (Connelly & Clandinin, 1988; Dewey, 1933; Knowles, 1993; Schön, 1983). As Knowles (1993) explained, “Reflection, to extend its purpose further, is seen as a means of emancipation and empowerment, a vehicle for allowing teachers to take control of their environments and circumstances in which they work and students learn” (p. 82).

However, for reflection to become an effective form of enhancing teacher practice, McIntosh (2010) warns teachers who employ reflective practice that they “can become mechanistic in their use unless fresh creative approaches are employed” (p. 43). Employing multiple strategies for reflective practice may be necessary to support the reflective process (Connelly & Clandinin, 1988). The process of photography is one such approach which might provide an imaginative avenue for teachers who are focusing on their own professional learning.

As a photography teacher and photographer, I am often asked to show examples of my images. When I show my photography, I am asked *how* did I take a particular picture or *why*. The first question, *how* the picture was taken, requires a technical answer, while *why* is speaking to my motivation, my thinking processes at the time the

picture was taken. Reflecting on what exactly influenced my perceptions when I took the photograph requires that I have the skills to acknowledge my own thought process. These are known as metacognitive skills or the skill of critical thinking, which is referred to in teacher reflective practice (Roland, 1995).

Purpose of the Study

The purpose of this study was to examine the effectiveness of the process of photography when used by teachers as strategy for reflective practice and its impact upon their own professional learning. The reason for conducting this study was to address whether the process of photography could enhance teacher reflection. Teachers need the capacity and the tools with which to embrace the complexities of the teaching environment as well as those of society (Feldman & Greenberg, 2005). Can the reflective process supported by the process of photography aid and assist teachers with their professional learning journey? Palmer's (1998) statement, "you teach who you are," must be taken to heart because knowing who you are, especially in the teaching profession, is not optional. It is foundational to being an effective educator.

Theoretical Framework

This study examined perceptions of the effectiveness of the process of photography when used as strategy for teacher reflection by teachers who wish to enhance their own professional learning. The study employs a constructivist design, where knowledge is produced or assembled by members of society (Creswell, 2005). Constructivism, as viewed from a researcher's or teacher's perspective, is viewed as:

The angle from which an entity is seen, the values of the researcher or teacher that shape the questions he or she asks about it, and what the researcher or teacher

considers important are all factors in the construction of knowledge about the phenomenon in question. (Kincheloe, 2001, p. 342)

Each and every learner constructs their own concepts or knowledge (Novak, 1998, p. 72), and the research design allows this knowledge to be examined by asking questions about how, why, and when. There are additional works which informed the basis from which this inquiry developed. Schön's (1987) work on reflective practice, built upon John Dewey's (1933) seminal work on reflection, illustrated two types of reflection: reflection-in-action and reflection-on-action, which are central to this inquiry. Reflection-in-action guides the teacher's in-the-moment decisions in the classroom. Reflection-on-action is the process of reflecting on the decisions a teacher has made in the classroom after the fact. Schön's (1987) description of the reflective process is very similar to Miholic's (1998a) study which pairs critical thinking and photography. Both of the processes of reflection and photography rely on the practitioner's ability to embrace the concepts and the willingness to employ strategies (Miholic, 1998a).

As well, Hatton and Smith's (1995) seminal report on teacher reflection has been invaluable to the development of this inquiry. The framework that Hatton and Smith used to describe the historical background and influential scholars of teacher reflection helped to narrow the focus of this inquiry in order to introduce the process of photography as a possible strategy. Using Hatton and Smith as a guide, four different types of reflective practice have been identified. They include: technical reflection, which is "concerned with the efficiency and effectiveness of means to achieve a certain ends" (p. 35); descriptive reflection, which "attempt[s] to provide reasons[for action] based often on personal judgment" (p. 40); dialogic reflection, which "is a form of

discourse with one's self, an exploration" (p. 40); and lastly, critical reflection, which "is defined as involving reason giving for decisions or events which takes account of the broader historical, social, and/or political contexts" (p. 41).

Research Focus Questions

This research was guided by a broad and overarching question: How does the process of photography as strategy for reflective practice enhance teachers' perceptions about their own professional learning? However, within the parameter of this overarching question, three focus questions were developed to further this study:

1. How do individual teachers define and describe reflective practice?
2. How do teachers who use critical thinking as part of the reflective process feel that it informs their professional learning?
3. How is the process of photography a useful technique for teachers to enhance their own professional learning and to facilitate critical thinking?

Outline of the Remainder of the Document

Chapter 2 reviews literature that was essential to the formulation of this study. It includes a compilation of what critics and scholars have published concerning the efficacy of the process of photography as strategy to enhance teachers' reflective practice. The literature review attempts to form a well-rounded depiction of teacher reflection and teachers' reflective practice in order to inform and position this inquiry.

Chapter 2 begins with a brief historical perspective. This overview provides a synopsis of some of the major contributions to the field of teacher reflection as it pertains to this study. Following the historical overview, the chapter provides a discussion concerning the pivotal study on teacher reflection and the many forms of teacher

reflection and how they are presently practiced. The chapter's next section builds a suitable base for teacher reflection. Reflection in teacher education has been defined throughout the reviewed literature in a multitude of ways. It is one of those terms with such a varied history that it seems to defy interpretation (Hatton & Smith, 1995). The chapter then introduces tools to enhance teacher reflection. One of the major tools that teachers use for reflection, the reflective writing piece, is positioned as one of the main supports of this study. The chapter then explores the process of photography as strategy and introduces its usage as a technique to enhance teacher reflection.

The final section examines the two main studies that have helped form the base of this inquiry and explores the process of photography and critical thinking. Miholic's (1998b) article *Using Photography to Heighten Critical Thinking* provides the backdrop for this exploration. This includes a section that explains how the process of photography and writing are related. The chapter also analyzes Miholic's (1998a) *Photography: A Writer's Tool for Thinking, Rendering and Revising*. Chapter 2 concludes with a brief summary of the literature reviewed.

Chapter 3 describes the methods that were used to guide this study. The methods were drawn from a qualitative approach to research which uses rich detail to describe the lived experience. The chapter discusses the research design, the selection of participants, and the procedure used with the participants. The remainder of chapter 3 explains quality issues and measures that were used in this inquiry, including the study's credibility, confirmability, transferability, and trustworthiness. The chapter concludes with the limitations of the research.

Chapter 4 presents the study findings as well as the analysis and evaluation of these findings. The chapter begins with a review of the three focus questions as well as the type of reporting mode used to tell the participants' stories. The three participants are teachers and they participated in exercises that dealt with reflection and the process of photography. Also, in order to provide continuity, the chapter outlines a brief summary of the procedures used in the study. Finally, the chapter presents a cross-case analysis of data and reveals the key findings.

Chapter 5 presents a summary of the research, and a discussion of key findings and how these findings contribute to our understanding of the reflective process. The chapter also discusses possible implications for teaching practice and future research endeavours.

CHAPTER TWO: LITERATURE REVIEW

There are many scholars, writers, and teachers who have contributed to the vast amount of literature relating to the understanding of reflection and reflective practice. Dewey, van Manen, and Schön were representative of the literature reviewed, and are the cornerstones of this inquiry. Hatton and Smith were chosen for this inquiry because their contribution to the field of teacher reflection most influenced the foundation of this study.

The second part of this review deals with literature surrounding the process of photography and introduces the two main studies that informed this inquiry since the beginning. The studies deal with teacher reflection as informed by critical thinking, reflective writing, metacognition, and photography.

Brief Historical Perspective

Historical perspectives are provided to set the stage for the inquiry. These perspectives are also a source of information as well as inspiration to the inquirer.

John Dewey

Prevailing practice within the reviewed literature concerning teachers' reflective practice begins by acknowledging Dewey's contribution to the popularity of reflection in teacher education programs today. Dewey studied works written by the greatest educators in recorded history: Plato, Aristotle, Confucius, Lao Tzu, Solomon, and Buddha (Houston, 1988). One reviewed source, *The Correspondence of John Dewey: 1871-1952* (Hickman, 1999), opened a treasure trove of data, which upon further investigation revealed Dewey's personal thoughts, beliefs, and influences regarding many subjects including reflection and teaching. Dewey is heralded as the "key originator in the twentieth century of the concept of reflection" (Hatton & Smith, 1995, p. 33).

In *How We Think*, Dewey (1933) describes reflection:

Reflection consists of a succession of things. But it's not just the sequence. It's all about consequences. Reflection is a consecutive ordering of thoughts or ideas in such a way that they determine a proper outcome. And each idea leads back to the previous one. (p. 2)

Dewey (1933) goes on to describe the emergence of ideas: "The ideas emerge out of each other. They don't calm and go like a medley" (p. 2). He adds that "Each phrase is a step from somewhere to somewhere else and each stage leads to the next. It's like a stream of flow or a train of thoughts were a chain of reason" (p. 2).

Hatton and Smith (1995) state that there are four key issues that emerges from Dewey's work. The first issue is whether or not reflection is limited to processes of thought about action or more "inextricably bound up in action" (p. 34). The second issue is related to the time frame within which reflection occurs. Is it immediate and short term or extended and systemic? The third issue that Dewey (as cited in Hatton & Smith, 1995) was concerned with was whether reflection is, by its intrinsic character, problem centered. The fourth key issue deals with a process in teacher reflection that has been identified as critical reflection because it takes into account a "wider historic, cultural and political values or beliefs in framing and reframing practical problems to which solutions are being sought" (p. 34).

For Dewey, the main function of reflective thought was to transform a "situation in which there is experienced...conflict [or] disturbance of some sort, into a situation that is clear, coherent, settled and harmonious" (Cooper, 1998, p. 50). Dykhuizen (1973) describes Dewey's thoughts on intelligence and reflection. He articulates that Dewey

describes the role of intelligence as becoming practical; its function is to guide the individual's efforts to adjust to the physical, social, and cultural environment (p. 69).

Dykhuizen describes Dewey's beliefs about reflection as a process:

Intelligence comes into play when there is a conflict of ends needing to be mediated. Impulse and habit cannot do this, so reflection is called on. Reflection involves postponement, delay, and the conscious weighing and balancing of the consequences attending alternative ways of acting. (p. 69)

Cooper (1998) concludes that Dewey left an intellectual legacy that has no rival regarding the educative process. Dewey believed that reflective practice was a form of "experiential learning, including the cultivation and expression of a student's individuality, the transformation of the classroom into a venue for free and independent activity, inquiry, and thought and the importance of learning through experience" (as cited in Cooper, 1998, p. 47).

Max van Manen

Max van Manen proposed a hierarchy of reflective practice that consisted of three divisions of reflection: technical reflection, practical reflection, and critical reflection (as cited in Hatton & Smith, 1995). Technical reflection is the first division. The main concern of technical reflection is achieving a certain objective, and achieving it efficiently. "The rationality of the best choice is defined in accordance with the principles of technological progress: economy, efficiency, and effectiveness" (Korthagen, 2001, p. 55).

Practical reflection refers to an openness of means, examination of goals, assumptions, and the actual outcomes. This second division of reflection assumes that

every “educational choice is based on a value commitment to some interpretative framework. Reflection at this level is concerned with analyzing and clarifying individual and cultural experiences, meanings, perceptions, assumptions, prejudgments, and presuppositions for the purpose of orienting practical actions” (Korthagen, 2001, p. 55).

Critical reflection is the third division. It encompasses the first two divisions, yet is further defined by its emphasis on the “value of knowledge and reflection [which] is then focused on the nature of the social conditions necessary for raising the question of worth whileness in the first place” (Korthagen, 2001, p. 55). It calls for moral and ethical considerations, and the concerns of social and political ramifications (Hatton & Smith, 1995).

Max van Manen (1990) brings forth the idea that descriptive and insightful writing can be used to engage students emotionally and cognitively as they write about lived experiences. Therefore, combining this element with the process of photography would strengthen the capacity for students to become even further immersed in writing activities.

Donald Schön

Although Dewey referred to reflective action, Donald Schön is best known for work concerning the timing of reflection. Schön’s (1983, 1987) reflection-in-action involves reflecting and doing simultaneously. A teacher who is consciously thinking about what is happening in the moment and who is then able to redirect her or his actions simultaneously is engaging in reflection-in-action.

Reflection-on-action, according to Schön (1983, 1987), asserts that the “educational preparation of professionals should be centered on enhancing the

practitioner's abilities to reflect, that is, to recapture an experience, think about it, mull it over, evaluate it, and then learn from it" (as cited in Feldman & Greenberg, 2005, p. 110). This reflection-on-action process is cognitive in nature. It involves the workings of the mind, the feelings of the heart, and the discipline of the body (Feldman & Greenberg, 2005). These are important considerations for this inquiry because the process of photography addresses critical thinking, and as Feldman and Greenberg (2005) suggest takes into account the physicality of reflection.

The Pivotal Report on Teacher Reflection

Hatton and Smith's (1995) report on teacher reflection was central to building a strong foundation for this inquiry.

Neville Hatton and David Smith

Hatton and Smith (1995) published a report consisting of an extensive review of existing literature on teacher reflection and reflective classroom practice. The primary objective of this study was to understand and advance instruction of reflective practice in teacher education programs. Hatton and Smith's report is an overview of a research project conducted in 1992 through the University of Sydney. This project attempted to identify and define different types of reflection. The researchers then applied the analysis to their participants' responses to written tasks. In discussing their findings, "the researchers found that this material provided only broad guidelines for beginning to specify more sharply, criteria against which evidence of reflection as defined might be evaluated" (Hatton & Smith, 1995, p. 33).

The aforementioned University of Sydney study was designed to examine the nature of reflection in teaching, to delineate specific forms of reflection, and to evaluate

the strategies involving teacher candidates (Hatter & Smith, 1995). The tasks in this study that the teacher candidates were asked to complete were oral interviews and several written tasks. These tasks were designed to highlight their ability and skill level concerning reflective practice, as it pertains to teaching and classroom management. The tasks identified in the 1992 study included:

written reports where the student teachers reflected upon the factors which had influenced their thinking and action, especially during implementation and evaluation, including their own perceptions and beliefs. Of special importance were the differences between intentions and actual outcomes, and what caused initial plans to differ from subsequent actions. (Hatton & Smith, 1995, p. 41)

The researchers who conducted the University of Sydney study agreed upon a working definition of reflection as “deliberate thinking about action with a view to its improvement” (Hatton & Smith, 1995, p. 41).

Hatton and Smith (1995) note that even though all sources of data were analyzed in the University of Sydney study, the written component were the tasks that provided the most evidence of teacher reflection. The outcome of this study led to Hatton and Smith’s identification of four types of writing: descriptive writing, descriptive reflection, dialogic reflection, and critical reflection:

1. Descriptive writing is writing that reports events and/or literature.
2. Descriptive reflection attempts to offer reasons and/or explanations, usually based on personal judgment or interpretation of literature and/or events.

3. Dialogic reflection is a form of discourse with one's self; an exploratory process or investigation of possible rationale. This is demonstrated by recording one's thoughts in reflective journals.
4. Critical reflection involves explanations or reasons given for decisions made or events, which take into account a broader picture of our lives as we live in a global society. This would include perspectives as seen through a lens, based upon a historical, social, and/or political context.

It is important to note that Hatton and Smith (1995) do not consider descriptive writing to be indicative of reflection or reflective thinking. Dirkx (2001), on the other hand, would question the classification of descriptive writing as nonreflective. He goes on to state that maybe this type of writing plants the seed for more thoughtful and deeper reflection at a later date. It also gives a fertile ground for contemplation and serves as reference in solving practical problems in the future. This is where timing is important to remember, as it is possible to reflect upon descriptive writing in the future (Dirkx, 2001). Also, reflection-in-action could have occurred while these events were happening (Dirkx, 2001).

The teacher candidates in this study were asked to reflect upon their choices of action or nonaction and decision making, as well as their reasoning behind the why or why not of the situation. Actually, Hatton and Smith (1995) were looking at the question of how to distinguish teachers' reflective writing as reflection being thought about now in contrast to then" "Instances of what was categorized as descriptive writing actually may have stemmed from reflection at or near the time events took place, if only that could have been captured" (Hatton & Smith, 1995, p. 42).

Evidence of Teacher Reflection

The main evidence of teacher reflection in the University of Sydney study was found in the written components (Hatton & Smith, 1995). These examples of reflection included the teacher candidates' writing ability to discuss, evaluate, and forecast their ideas concerning the process of their planning, development, implementation, and evaluation of their practice (Hatton & Smith, 1995). The teacher candidates were also allowed to draw upon reflective journal entries to remember and reflect upon their practice.

Candace Stout (1993), an advocate of writing in journals in which the teacher candidate first makes field notes and then responds to those notes, believes that writing advances discovery. Stout writes, "No other thinking process helps us so completely develop a line of inquiry or a mode of thought" (p. 36). Reflective writing then becomes a type of "written speech" (p. 37). Stout suggests that "writing takes longer than talking" and "writing places our thoughts before us" (p. 37).

Henry (1999) states that students also need to experience the process of putting their own thoughts to paper, and sharing exemplary pieces with others, just as they are typically shown examples of exemplary artwork. Feldman and Greenberg (2005) echo Stout's (1993) point in their findings that writing and "journaling offers opportunities for students and practitioners to reflect on their practice, explore reactions, discover relationships, and connect new meaning to past experiences" (p. 111). Maule (2001) further describes this type of activity as active learning that occurs "through exploration, manipulation and experimentation" where the "user constructs personalized interpretations and individualized knowledge" (p. 28).

Roland (1995) states that “writing is not only a medium for thought, it is a potentially powerful vehicle for developing it” (p. 122) and used journal writing in his education methods classes to enhance metacognitive skills. Hatton and Smith (1995) suggest “there is some evidence that reflective capacities can be fostered by providing teacher candidates with strategies and experiences which develop the required metacognitive skills” (p. 27). Frederiksen, Glaser, Lesgold, and Shafto (1990) suggest that metacognitive skills could include:

the skills of planning, monitoring your processing during a task, checking what you have done, estimating what a reasonable answer might be, actively considering possible alternative courses of action, separating relevant information from irrelevant information, choosing problems that are useful to work on, asking good questions, and so on. (p. 79)

How does one develop these skills? It is within the exploration of words, thoughts, and ideas that reflective writing becomes personal (Roland, 1995). Teachers who continue reflective writing throughout their entire careers are able to look back upon past decisions, events, and personal choices that were made, which could provide valuable insight that might have been lost had they not engaged in this practice (Roland, 1995).

While there are strategies that have the potential to encourage reflection, there is little research or literature to evidence how this is actually being achieved (Hatton & Smith, 1995). Hatton and Smith (1995) explain:

It is necessary to move beyond self-reports to the identification of ways in which reflective processes can be evidenced. It is not sufficient to assert that reflection

is encouraged by a procedure or technique; rather, means must be specified to demonstrate that particular kinds of reflecting are taking place. (p. 42)

Teacher candidates in the University of Sydney study are told that the intention of self-reports is to promote reflection on practice (Hatton & Smith, 1995): “The interview data from the 1992 cohort suggest that students saw the academic context and expectations of essay writing established within the wider institution as inhibiting their ability and willingness to reflect in an assessable piece of work” (Hatton & Smith, p. 46). Hatton and Smith further elaborate that “traditional academic genre is characterized by features that are in many ways the antithesis of the personal, tentative, exploratory and at times indecisive style of writing which would be identified as reflective” (p. 46).

The use of reflective journals, collaboration amongst peers, and practicum experiences that are being utilized in teacher education programs are sometimes labeled as reflective (Hatton & Smith, 1995). Although they are useful, they are not often “deliberately directed towards the solution of specific practical problems” (p. 42).

Yet, reflective writing can be poignant and personal. Tracy Barsoti is a teacher. Her reflective writing—evidenced in her work presented below, titled “How Have I Come to Understand Myself as a Teacher?”—is personal and perhaps not directed towards the solving of a specific problem; yet, it provides an example of how reflective writing can serve as a catalyst to better understand the relationship between herself, as teacher, and her students:

I have come to understand myself as a teacher, or have I?

I am a joker and a yeller.

I am kind and often rude.

I stand in front of the room saying, listen, listen, listen in a quiet voice.

I yell at kids for talking, but laugh at what they say.

I am patient (often).

I do not want to make my students cry.

I am crushed by my administration (and I still don't have the books).

Without a curriculum, I teach what I know and sometimes what I don't.

I listen to their questions, and try to answer. And I say when I don't know.

I am giving all I have.

I am giving all I have.

I have come so far so fast.

I have come to understand myself a teacher.

That's the most that I can do. (As cited in Feldman & Greenberg, 2005, p. 111)

Barsoti's reflective stance lets the reader inside her thoughts as she tries to understand herself as learner, teacher, and human being. Her prose illustrates that the different personas of a teacher may be hard to separate.

Building a Suitable Base for Teacher Reflection

The major teacher education programs written about in Hatton and Smith's (1995) report were mostly concerned with the complexity of reflection and the importance of understanding this complexity. Yet, Hatton and Smith point to the difficulty concerning "the identification of a suitable knowledge base as a starting point for helping student teachers first understand the concepts of reflection and then apply them, especially the more demanding forms to their own teaching" (p. 37).

Finding other literature sources dealing with creating a knowledge base for beginning teachers to use reflective practice in the classroom was comparatively straightforward. "Preparing teachers to teach thoughtfully, is to consider the consequences of their work, and involves creating opportunities for beginning teachers to learn the skills and attitudes required for reflective practice" (Richert, 1992, p. 171). The literature discusses reflective practice and classroom practice simply as being "critically reflective problem-solving and decision-making in classrooms and in schools" (Hatton & Smith, 1995, p. 43). Max van Manen (1977) stresses the significance of contextual influence on the way teachers teach. Schön's (1983) reflection-in-action is certainly a goal for most practitioners of reflective practice.

In order to help teacher candidates understand the concept of reflection and build a suitable knowledge base from which to develop a reflective practice, Hatton and Smith (1995) explore Zeichner and Liston's (1990) four historically based traditions. These traditions, as described by Hatton and Smith, represent the major teacher education programs that were profiled in the University of Sydney study. The four traditions are noted below.

Academic Tradition

The teacher candidates learn the essentials of good teaching. They learn the essentials of transferring knowledge so that their students can learn (Zeichner & Liston, 1996).

Social Efficiency

Teacher candidates try to develop their best practice based on research findings and on their ability to comprehend and actuate these findings. Teachers, themselves,

have their own ideas, beliefs, and theories that can add to the betterment of the teaching profession and for all teachers as individuals (Zeichner & Liston, 1996).

Developmentalist Tradition

This refers to teacher candidates' understanding and application of that understanding into how students' growth patterns change their behavior and thought patterns (Zeichner & Liston, 1996).

Social Reconstructionist

Here, teacher candidates are supported to change their own practices, also recognizing that schools "continue to reproduce a society based upon unjust class, race, and gender relationships" (Hatton & Smith, 1995, p. 44). Teachers who choose to reflectively engage and participate within their communities and their schools (Zeichner & Liston, 1996) are more likely to grow as professionals. Recognition of the fact that teachers should be active in formulating the reasons behind the whys and the how of their work should be obvious. Assessing and reexamining their own values and assumptions could lead them to play greater leadership roles in curriculum development and school reform (Zeichner & Liston, 1996).

Teacher education programs are usually exposed to all four traditions as mentioned above, and it is fair to say that perhaps the programs, themselves, favor one over the other (Hatton & Smith, 1995). A blending of these traditions leaves some professionals in a precarious position (Hatton & Smith, 1995). It is very important to note that sometimes it is largely left up to the individuals to embrace reflection, whatever that means to them personally, as they progress through their studies and throughout their professional careers. As a teacher's career progresses, habits are formed and patterns in

teaching are set (Hatton & Smith, 1995). Also, conditions such as personal life, time constraints, and economic conditions can prevent some teachers from rethinking their careers as well as their reflective practice (Hatton & Smith, 1995). It could be asked whether or not it is up to administrators and/or the individual to keep reflective practice as a part of professional development programs (Hatton & Smith, 1995).

The Process of Photography as Strategy

As mentioned in chapter 1 of this study, for teachers to keep reflective practice at the forefront of teaching, innovative, fresh, and creative ideas are needed in order to enhance their own practice (McIntosh, 2010). Teachers' interest in alternative tools with which to enhance their practice, given today's technological culture, might be a strategy that involves digital capabilities. The process of photography might fill this criterion.

Subtleties of Meaning and the Process of Photography

Gross and Shapiro's (2001) *The Tao of Photography* emphasizes creativity and heightened awareness rather than promoting a formal technique. The word "process" (of photography) as used in this inquiry holds the same meaning as conscious photography or mindful photography (Gross & Shapiro, 2001). Mindful photography is a state of awareness that allows the person behind the camera to focus. "It is not just pushing the shutter button; mindfulness is simply being observant, attentive, careful, deliberate, and focused" (p. 63).

Leahy and Rindge (2004) add, "One perennial conceptual problem is moving students past notions that photographs are mere illustrations when paired with written text" (p. 110). In my own experience, another related problem is moving students past the concept that the image is all that is important to photography. In other words, the

making of the image or the practice of photography lends itself to the idea that the image is either the beginning of the cognitive process or as a result. It is important to move beyond what it is (the product) to one of that it is (the process).

The idea of photography as a means to capture snapshots of friends and events is a common idea with which most people are familiar. Yet the act of photographing and consciously thinking about the process of making images, rather than taking pictures, is something that is uncommon (Gross & Shapiro, 2001). People are result oriented, not process driven (Westburg & Martin, 2003). Furthermore, “the assumptions here were that photography, more than merely representing, has contributed to the emergence of a way of seeing, and that this way of seeing informs contemporary self-understandings” (Lury, 1998, p. 218). Contemporary self-understanding is the way we see and judge ourselves; it is the image of ourselves that is projected. For example, Lury (1998) expands the idea that the standard of beauty that exists today in western culture does not exist outside of the *image* itself, aided by Adobe Photoshop and the expertise of digital specialist. This type of understanding is not messaged in or throughout our classrooms or our lives. “Indeed, it was argued that it is a consequence, in part, of the adoption of this way of *seeing* that capability has come to be disassociated from intention, consciousness and embodiment” (Lury, p. 218).

Moran and Tegano (2005) present photography as a language for teacher inquiry. Their description of three interrelated functions of photography as an analytical framework for how photography contributes to the development of teacher inquiry is suitable for this discussion. The three functions are representational, epistemological, and meditational.

The representational function of photography has to do with meaning. This function of photography is about the creation of meaning, the depiction and symbolizing [of meaning] through the use of photographic language (Moran & Tegano, 2005, p. 26). The context of photographs conveys “different meanings to different viewers based on personal life experiences, knowledge, and perspectives” (p. 26).

The epistemological function of photography deals with the use of photographs as a source of new knowledge. Through individual and collective study, reflection, and analyses of photographs, teachers access the epistemic potential innate to using photography as part of the process of teaching (Moran & Tegano, 2005, p. 26).

The mediational function of photography, according to Moran and Tegano (2005), serves to link thought to action and provides the perfect opportunity to articulate the distinction between taking photographs and the process of photography:

The act of bringing the camera to the eye links what is in the mind to what is happening outside, such that the camera is a tool that connects what one aims to record to what is actually recorded in a photograph. Moreover, the camera also provides a lens to focus the teacher's attention. (p. 27)

Moran and Tegano point out that the mediational function of photography emphasizes the act of photography or process of photography. The intention of the photographer is of key importance. They describe the mediational function of taking images as based on the intent of the photographer for taking the picture, an intent that occurs as the photographer looks through the lens of the camera and makes a connection between their thinking and what they are seeing in the viewfinder of the camera.

Richter (2006) provides an example of mediational function of using the camera

to take images in his description of the Trappist monk Thomas Merton, the celebrated theologian, mystic, poet and social activist. Richter tells the story of how Merton discovered a passion for photography only 4 years before his death, and advised his friend, the poet Ron Seitz, that, when photographing, one should:

stop *looking* and ... begin *seeing*! Because looking means that you already have something in mind for your eye to find; you've set out in search of your desired object and have closed off everything else presenting itself along the way. But seeing is being open and receptive to what comes to the eye. (p. 195)

Richter (2006) further describes how the camera, in Merton's hands, was to become "a medium to reverentially contemplate what he saw and experienced in a given moment" (p. 195). Merton exemplifies the use of the mediational function of the act of photography, as he thought of photography as a way both "nurturing a heightened awareness of the immediate environment and also capturing and passing this on to others" (p. 195). The mediational function of the act of photographing engages the photographer in the critical thought processes of understanding the intention of taking the image, and to stop looking and actually begin to see. In a natural sense, photography became Merton's instrument for reflection—a form of critical thinking about the world around him.

The Process of Photography and Critical Thinking

Hatton and Smith's (1995) report on teacher reflection describes how it is possible for Miholic (1998b) to position photography as an impetus to enhance critical thinking. In doing so, Miholic (1998a, 1998b) introduces photography as a tool that can also be used to enhance critical thinking. The process of photography lends itself to the art of

critical thinking (Miholic, 1998b) because the “camera’s lens often reveals nuances and detail commonly overlooked” (p. 111). Critical thinking, particularly constructing, identifying, and assessing an idea, can be evidenced by the act of photographing (Miholic, 1998a, 1998b). The act of photography assists the photographer in “appreciating point-of-view; and weighing conclusions, inferences, and interpretations” (Miholic, 1998b, p. 111).

Miholic (1998a) defines critical thinking in terms of steps derived from work by Paul (1993). Critical thinking is a kind of focused thinking in which the “thinker systematically and habitually imposes criteria and intellectual standards upon the thinking” (Paul, p. 21). Paul also states that the criteria should include constructing, identifying, and/or assessing: “(a) a purpose or goal, (b) a problem or question at issue, (c) an empirical and conceptual dimension, (d) assumptions, (e) conclusions, inferences, or interpretations, (f) a point of view or frame of reference, and (g) reasons” (p. 319).

Miholic (1998a) compares these steps of critical thinking to principles that inform the act of taking a photograph. The photograph “focus, focal point, depth, time, framing, and exposure can enlighten thinking. It is an effective tool in refining how students see and reason” (p. 21). He further explains, “The photographer is able to manipulate images to convey the idea he or she intends to evoke, the camera demands that the photographer weigh alternative views and angles to develop an accurate composition” (p. 24). As the photographer weighs different views, outcomes, and compositions, he or she engages in critical thinking of what is viewed through the camera, making connections.

The Process of Photography and Writing

Hatton and Smith's (1995) study on teacher reflection describes reflective writing as a tool for teacher reflection and a result of critical thinking, and introduces Miholic's (1998b) study that positions the process of photography as an impetus to enhance reflective writing. Miholic (1998b) refers to descriptive writing as reflective writing. In doing so, he introduces the process of photography as a tool for writing and compares descriptive writing, or reflective writing, and photography's role as strategy to enhance these examples:

The basic processes and creative acts associated with photography parallel those of writing [see Table 1]. Just like the writing process, the photographic process is not linear. Much of the process may be recursive, where different functions of the process inform the others. (p. 29)

Photographers are experimenters, and as Miholic (1998a) indicates, writers are the same. As photographers develop a print, as with a writer's first draft, often they return to the work and conduct further experiments with "the subsequent prints, reducing, enlarging, manipulating content—the first print may be underdeveloped or overdeveloped, the contrast or tone may not be quite right. The process, therefore, aids perspective, guards against oversimplification, and tends to expose the photographer's assumptions" (Miholic, 1998a, p. 28).

In Miholic's (1998a, 1998b) studies, 17 high school students were each asked to write a descriptive paragraph on any subject, object, or idea. After the paragraph was completed, the student then photographed the chosen object or subject from many different angles and perspectives.

Table 1

Comparing Writing and Photography Concepts

Writer	Photographer
Topic / Subject	Subject / Object
Point-of-view	Vantage Point / Angle
Thesis	Focal Point / Framing
Specific details / Scope	Cropping / Framing / Depth of Field
Foreshadowing	Lighting / Foreshadowing
Developing / Drafting / Processing	Developing / Processing
Revision / Patterning	Exposure / Cropping / Enlarging / Reducing

Note. From Miholic (1998a, p. 29), used with permission.

As Miholic (1998a, 1998b) explains:

the photograph is not serving to limit but to expand the possibilities of how the object is seen and how the writer chooses to write about it. The ability to see the object differently in order to revise is a valuable asset. (p. 24)

When the students looked at their own photographs, they were then asked to consider a series of questions to aid in reconstructing their early writing taking into account the photographs they have taken. This exercise is particularly useful in developing critical thinking skills as well as being helpful in spotting missed details within their descriptive paragraph (Miholic, 1998a). Miholic (1998a) equates the two processes of writing and photography:

Often students develop an idea incompletely. The image conveyed on paper is often out of focus, the tone too muddled, the content too general, or essential details that bring life to writing are overlooked. The camera's lens suggests an evaluative question: how am I looking at this object? Informing the creative act is the writer's chosen angle. (p. 25)

The paragraphs below were drafted by a student enrolled in a developmental writing course, who was a participant in Miholic's (1998b) study. The student chose to create a piece about a boy (perhaps himself) and an old pick-up truck (Miholic, 1998b). Below is an edited version of the first paragraph. It is the rough draft that the student had written before photographs were taken.

A little boy riding in a truck that is as black as a stallion. He is surrounded by grass, trees, leaves, and trailer. It is bright and sunny outside as he plays in his truck. The child inside of the truck has silky blonde hair almost like that of a

fresh ear of corn. The little boy is having fun and enjoying the weather outside. He has a joy about himself that no one can touch or disturb. He is ready to go anywhere the truck will take him. There is also a lot of interesting things surrounding him. Trees stand around him and his truck waving briskly in the wind. The birds are chirping a beautiful humm and enjoying the day. It is close to spring. You can tell by the sun and the trees. The trailer that stands in front of the boy is a pale white much like the color of a vanilla ice cream. Also, a pile of leaves is lying lazily beside the truck. A sound of wind rushes past the ear. (p. 26)

The student went to the old farm that he had written about in his first draft and spent time exploring and photographing the pick-up truck, the surrounding area, and anything that could provoke his memory about the day. The student, with his photographs to reference, returned to the class and penned the final draft below. Again, it is edited for brevity while maintaining the integrity with which it was written.

A little boy rides in a truck with a red lightning rod slashed across the side door and bed. The child is surrounded by grass, trees, a pile of leaves, and blocks of aged wood. The sun shines brightly as he plays in his truck and fills the bed with leaves and wood. Now everything is at peace, and the child is full of joy. The child inside of the truck has silky blonde hair almost like that of a flesh ear of corn; his eyes are as blue as fresh blueberries with lips the color of the inside of a watermelon. Ready to arrive anywhere, the truck will take him; he sits and waits, looking at the things around him. He contemplates his next move while trees wave in the brisk wind. The birds, resting on the branches of a nearby tree, chirp

a beautiful hymn and enjoy the day. Spring is popping up everywhere among the plants and wildlife. A pile of leaves sit lazily beside the truck; they crunch as the truck wheels slightly roll over them. The grass that lies upon the ground is brown with some lively green sprouts springing up across the lawn leaves are scattered here and there where someone stopped racking. Bare spots are seen in different spots where fresh green grass has not yet begun to grow. One can also absorb pieces of the sky peaking through the tips of the trees. A field is seen through the trucks of the trees and bushes that line the fenced area. Cows graze around the field before milking. One may hear their moos as they stand looking. Content and happy where he now sits, he relaxes and settles back into his seat and watches the children playing next door on their swing. No movement in the truck is heard, only the light sound of the breeze around him and the smell of old leaves. The world is now calm and gentle without a noise or whisper of song; the child is now resting lazily beneath the trees. (Miholic, 1998a, p. 27)

Miholic (1998a) states that “we comprehend and negotiate experiences or texts depending on our foundation and how we use our rational lens” (p. 28). He further elaborates:

The more we increase, decrease, or filter what our minds receive, working to adjust and develop an image or perception, the closer we move to fully realizing or understanding an idea. The more we increase, decrease, or filter what our minds receive, working to adjust and develop an image or perception, the closer we move to fully realizing or understanding an idea. (p. 28)

The more adjustments we make in our ways of thinking by “adjusting the depth of our thinking, we become more aware of how and what we see” (Miholic, 1998b, p. 28). The camera is a great purveyor which when consciously used informs us of what and how we are thinking. “The camera serves to expose our thinking and help us to question how we think” (p. 28).

Miholic’s (1998a, 1998b) studies included exercises that utilized both reflective writing and photography to assist student participants in the reflective process. Although the exercises were constructed for use with high school students, the concept behind the exercises might inform the use of the exercises with other populations who engage in reflective practice, such as teachers.

Summary

When reviewing the literature, the inquirer must always be open to thinking in new ways and seeing ideas that are not presupposed (Erlandson, Harris, Skipper, & Allen, 1993). One such concept that I had not presupposed was the connection between writing and photography.

This literature review discussed important historical views and the current state of teacher reflection. Included in this review were the major contributors to the field of teacher reflection and reflective practice.

The use of reflective practice is viewed as a strategy to improve teaching practice (Hatton & Smith, 1995); however, the definition of reflective practice and how it is implemented appears to be the responsibility of the teachers themselves who choose to engage in reflective practice (Feldman & Greenberg, 2005). As well, the choices of strategies that are used to enhance the individual teacher’s reflective practice become a

personal choice because “the real world is dynamic, there are no preset solutions to real life problems” (Feldman & Greenberg, 2005, p. 110). One reflective strategy, specifically reflective writing, has been shown to effectively enhance teacher reflection (Hatton & Smith, 1995). Miholic (1998a, 1998b) further provides insight into how the photographic process can be used as a method for enhancing written reflection, but for high school student participants.

This inquiry investigates how the photographic process, when used as a reflective practice of teachers, enhances teachers’ perceptions about their own professional learning. Hopefully, the findings will spark an interest in those who might reconsider their own reflective practice, how it is implemented, and what strategies they could use to continue and even renew those interests.

CHAPTER THREE: RESEARCH METHODS

This study investigated the efficacy of the process of photography when used as strategy to enhance teacher reflection. The study employed a qualitative approach, in which rich detail described the ebb and flow of the lived experience, and provided the researcher with appropriate methods necessary to explore participant perceptions (van Manen, 1977). “The commitment is to study human action in a setting that is not contrived, manipulated, or artificially fashioned by the inquirer” (Schwandt, 1997, p. 102). Creswell (2003) suggests that qualitative research is exploratory and is useful when the significant variables to examine are ambiguous. He also concludes that this “type of research may be needed because the topic is new or the topic has never been addressed with a certain sample or group of people or existing theories do not apply” (p. 69).

Qualitative Inquiry

Qualitative research has a long and varied history. There are many differing opinions, disputes, and controversies concerning what exactly constitutes legitimate qualitative research. “Fields of inquiry change over time and as they change so do our conceptions of what research is and what it should do” (Bochner, 2005, p. 56). That being said, one of the reasons I chose qualitative inquiry was its flexibility, which allowed transformation over points in time as the data began to emerge.

According to Lincoln and Guba (1985), qualitative methods sometimes lend themselves better to dealing with multiple realities more so than quantitative methods. For one reason, the multidimensionality of the relationship between investigator and respondent is accentuated. Also, qualitative methods can be seen as more sensitive and

“adaptable to the many mutually shaping influences and value patterns that may be encountered” (Lincoln & Guba, 1985, p. 40).

My inquiry depends upon this type of multidimensional structure because “this ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood” (Baxter & Jack, 2008, p. 544). In my opinion, “the results of a qualitative research study are most effectively presented within a rich narrative, sometimes referred to as a case study” (Maykut & Morehouse, 1994, p. 21). Lincoln and Guba (1985) explain that the case study reporting mode is preferred over the “scientific or technical report because it is more adaptive to a description of the multiple realities encountered at any given site” (p. 41), and, as stated, it is able to exhibit a range of “mutually shaping influences” that are present (p. 42). It can “picture the value positions of investigator, substantive theory, methodological paradigm and local contextual values” (p. 42).

Research Design

In order to investigate the efficacy of the process of photography as strategy for teacher reflection, a qualitative approach was taken because it is “an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources” (Baxter & Jack, 2008, p. 544). The qualitative approach integrates more of a literary structure (Creswell, 2003): “Computer text analysis programs and experience in conducting open-ended interviews and observations” are the components of qualitative research which allows a concept or phenomenon to be understood (p. 82).

Below are characteristics of qualitative inquiry that were utilized as methods with which to inform the structure of this inquiry. These characteristics are included here

because they play more than a supporting role in informing this inquiry they assist the reader's understanding of how this inquiry functions on a structural level.

Purposive Sampling

The purposeful sampling of participants is used in order to have as diverse a population as possible (Schwandt, 1997). The aim of purposive sampling is "identifying and including in the study those information-rich cases" (Rice & Ezzy, 1999, p. 42). This type of participant selection was preferable for this inquiry as it did not require, nor did it favor, large sample sizes (Lincoln & Guba, 1985). Random or representative sampling was not chosen, "because the researcher's major concerns are not to generalize the findings of the study to a broad population or universe but to maximize discovery of the heterogeneous patterns and problems that occur in the particular context of the study" (Erlandson et al., 1993, p. 82). As Erlandson et al. (1993) indicate, "In qualitative research one is looking more for quality than quantity or for information richness rather than information volume" (p. 82).

Inductive Data Analysis

Inductive data analysis was used because it gave a greater chance that multiple realities would be found. By doing this, the data became more lucid and identifiable. As well, the "interaction between investigator and respondent was more explicit, recognizable and accountable because inductive analysis was used" (Lincoln & Guba, 1985, p. 40).

Emergent Design

Emergent design allowed data to surface flow and unfold. I used emergent design "rather than to construct it preordinately (a priori) because it is inconceivable that enough

could be known ahead of time about the many multiple realities to devise the design adequately” (Lincoln & Guba, 1985, p. 41). A characteristic of emergent design that was used is focus-determined boundaries. Focus was established by using one interview question that is an overarching, broad, and open-ended which allows multiple realities to further define the focus of this study (Lincoln & Guba, 1985).

Individual Emergent Interviews

According to Erlandson et al. (1993), interviews in qualitative research “take more of the form of a dialogue or interaction” (p. 85). An emergent study design requires an emergent style of interviewing (Erlandson et al., 1993; Lincoln & Guba, 1985). This process begins with one overarching question; it is the same for each participant. Yet as the individual participant begins the interview process by addressing the overarching question new possibilities and unique opportunities in their answers avail themselves to further explore that participant’s views. What emerges in their speech leads the inquirer down a pathway of information that might not have been expected.

Negotiated Outcomes

Negotiated outcomes were used as a form of member-checking to “negotiate meanings and interpretations with the human sources from which the data have chiefly been drawn because it is their constructions of reality that the inquirer seeks to reconstruct” with outcomes that “depend upon the nature and quality of the interaction between the knower and the known” (Lincoln & Guba, 1985, p. 41). Member-checking, the act of “soliciting feedback from respondents on the inquirer's findings” (Schwandt, 1997, p. 88) was used by the researcher at the end of the interview, by providing the participant with a summary of what the researcher has understood during the interview.

After the interviews, the transcriptions of the participant's perceptions are reviewed and sent to the participant. If further changes are required, they are corrected and then forwarded to the participant who, again, reviewed the document, as a second form of member checking. The process of reviewing and clarifying continues until saturation, which is the point where no new information was being revealed (Erlandson et al., 1993). At the conclusion of all data generation, a final summary of participant perceptions is created and presented to the participant for a final review, refinement, and clarification of perceptions.

Participants

Using purposive sampling, five teachers were recruited; they were chosen for their interest in participating in this study, their interest in reflective practice, and their curiosity about the process of photography. As well, in order to provide information richness to the discovery, these five participants were selected to ensure a larger range of experience, taking into account multiple backgrounds and perceptions. Therefore, male and female participants, who teach in southern Ontario, at different levels, or are employed in unique teaching situations, were recruited to join this study.

Unfortunately, only three of those approached agreed to participate in this study. The reasons cited by those not participating were previous commitments, time constraints due to the ending of the current semester, and family obligations. Although they have very similar backgrounds, the three remaining participants provided a diverse sample. The samples were diverse because the three participants viewed reflection from three very different perspectives. Chapter 4 reveals the three participants' perspectives on reflection as well as completed exercises all of which were approached in unique ways.

Data Collection

In qualitative inquiry it is important to provide clear data so that the voices of the participants of the study are presented as accurately as possible. Therefore, the collection procedures must also be transparent as they form the basis of the inquiry.

Data Sources

In order to ensure trustworthiness and authenticity of the study, multiple data sources were collected, including the “Researcher as Instrument” reflective statement (see Appendix A), personal reflections from participants, my personal reflection journal, other artifacts, such as digital images taken during the study, as well as transcriptions of individual interviews.

“Researcher as Instrument” reflective statement. Qualitative inquiry requires the researcher to see “her or himself as well as other humans as the primary data gathering instruments” (Lincoln & Guba, 1985, p. 39). Erlandson et al. (1993) explain that, even though humans are biased, the human or researcher as an instrument for inquiry is preferred over all data gathering methods, and utilize what one comes into the world with (i.e., the five senses, plus intuition) to gather, analyze, and construct reality from data. The primary instrument in this type of research is the researcher. As a participant/researcher, who is also a photographer, I am biased and prejudiced in my beliefs about all aspects of photography, especially the process of photography. This form of inquiry makes provisions for complete disclosure of these personal biases, before the actual study begins. Therefore, it is necessary to form a statement of researcher as instrument. Erlandson et al. (1993) acknowledge “a record needs to be kept on the primary human instrument that is being used” in this study (p. 108). The “Researcher as

Instrument” statement presented in Appendix A includes what I deemed to be my values and biases as they pertained to this study. It briefly chronicled my life as a professional photographer and as a teacher. The statement allows readers to understand the perceptions and experiences that have informed my choices as the researcher instrument of this inquiry. The benefit of this, as stated, was to examine beliefs and articulate them in this manner before data were collected. In doing so, a certain sense of freedom to explore and move beyond the personal was achievable.

Participant journal reflections. The participants were given a sketchbook to be used as a journal. This journal was a Strathmore Sketch Book which is 9” x 12” and consisted of 100 sheets of 60 lb. paper. This particular sketchbook was chosen for its durability, size, and texture of paper. It was ideal for writing text, attaching photographs, painting, or using markers. It has been a standard in my reflective practice for several years. This journal became the home of the participants’ thoughts, ideas, drawings, and especially photographs. The participants responded to the three exercises given to them. At the end of the study, these journals were photocopied, and returned immediately to the participants.

Personal journal of researcher. I kept a journal that included personal thoughts, actions, and photographs. I chose to keep a photo-journal on my reflections as a researcher because the researcher as instrument “builds upon his or her tacit knowledge as much as if not more than upon propositional knowledge, and uses methods that are appropriate to humanly implemented inquiry: interviews, observations, document analysis, unobtrusive clues, and the like” (Lincoln & Guba, 1985, p. 187). My journal also consisted of scheduling, notes on daily choices, drawings as well as “logistics,

insights and reasons for methodological decision. ... The reflexive journal supports not only the credibility but also the transferability, dependability and conformability of the study” (Erlandson et al., 1993, p. 143). I recorded this journal in an analytic autoethnography form, which refers to research in which the researcher is: “(1) a full member in the research group or setting, (2) visible as such a member in published texts, and (3) committed to developing theoretical understandings of broader social phenomena” (Anderson, 2006, p. 2).

Artifacts. Artifacts were collected as an additional data source. “Artifacts can be technological devices (e.g. computer printouts, and disks), works of art, writing instruments, tools and almost any other physical evidence” (Erlandson et al., 1993, p. 100). Therefore, the artifacts in this particular inquiry consisted of printouts of extraneous work from the participants’ journals, any disks that were generated by the participants, and documentation of the camera they used for making photographs.

Individual interviews. According to Erlandson et al. (1993), “Interviews ... take more of the form of a dialogue or interaction” (p. 85). As mentioned, the interview process began with one interview question that was overarching, broad, and open-ended: How does the process of photography as strategy for reflective practice enhance teachers’ perceptions about their own professional learning?

During the interview, conversation was solicited by asking the participant to clarify perceptions through open-ended probing questions. An example would be a response to the participant’s perceptions, such as “that is interesting. Please tell me more,” or “Could you explain what you mean by that?”

Procedures

As stated above, the process began with one initial interview question that is overarching, broad, and open-ended; therefore, for this study, the interview question for each participant was: How does the process of photography as strategy for reflective practice enhance teachers' perceptions about their own professional learning?

The participants met with me in an interview context approximately two times. In the initial interview, directions were given to participants to use the provided Strathmore Sketch Book as a reflective journal. This sketchbook, used as a journal, contained the participant's writings and photographs.

Participants were asked to conduct three exercises with the camera similar to activities described in Miholic's (1998a, 1998b) studies, which discussed the usage of photography to heighten critical thinking and using photography as a tool for writers. The three exercises are described below.

Exercise 1: Abstract concepts. The first exercise consisted of each participant photographing an abstract concept. Instructions to the participants were to choose an abstract concept and photograph an object, scene, or other representation of that abstraction. Abstract concepts were explained to the participants as subject matter that cannot be interpreted literally. The examples given were wealth, happiness, and pollution, to name a few (Miholic, 1998a, 1998b). They were then instructed to write about their experiences while photographing and post the writings in their journals. The only provision was that the writings and/or photographs could not contain people or likenesses of individuals who could possibly be recognized. After completing the exercises, the participants were asked to upload the images to a computer, print, and

include the pictures in their journals. They then wrote about the experience and/or the photographs they chose to put into their journals.

Exercise 2: Seeing perspective. In this exercise the participants were asked to photograph a certain place or object of their own choosing in three different ways. They were asked to photograph their subject:

1. close-up, as close as they choose but not more than 4 feet away;
2. at a distance, from more than 50 feet away; and
3. using different angles (e.g., from above, below, back, or side—anything different from the first two photographs).

After completing the exercise, the participants were asked to upload the images to a computer, and print them for inclusion in their journals. They wrote about the experience and/or the photographs they had chosen to put into their journals. Questions for the participants to help guide them through the exercises are listed in Appendix B—“Critical Checklist for Purpose, Point of View and Interpretation.” After the participants completed their journal reflections, I picked up the journals, photocopied the pages, and returned them immediately.

Exercise 3: Using photography as a tool to inform writing. In this exercise the participants were asked to write descriptively about any place or object. They were to photograph the object or place described, upload the images to a computer, and print them out for inclusion in their journals. At this point, the researcher contacted the participants and gave them the “Critical Checklist for Re-examination and Revision” (see Appendix C), as a guide to revising their descriptive paragraph. Miholic (1998a) describes the process as follows: “When students view the prints, they are required to

consider a series of questions to aid in reconsidering their early drafts with respect to the photographs. ... This critical thinking inventory aids in searching for missed details and ideas” (p. 21).

After rewriting the descriptive paragraph, they were encouraged to reflect on any different points of view, emotions, feelings, or discoveries that they might have experienced. By re-reading their own paragraph, any surprises and differences were noted.

Participants were asked to complete the exercises independently, within a short period of time. After exercises 1 and 2 were completed, the participants were asked to complete exercise 3. Exercise 3 was concealed within the journal to be opened upon the completion of exercises 1 and 2.

The concluding interview was conducted upon the completion of all three exercises, where the journals were returned. The meetings lasted approximately 45 minutes to 1.5 hours in length. Interviews were tape recorded for transcription purposes. At the end of the interview I performed a member-check which consisted of creating a short summary or case of what was said. The participants were asked to member-check the constructed case for accuracy of the presentation of their voices.

Data Analysis

Approaches used to analyze qualitative data are numerous and varied. Generally speaking, it is a “non-mathematical analytic procedure that involves examining the meaning of people’s words and actions” (Maykut & Morehouse, 1994, p. 21).

Therefore, data analysis began with the first generation of data, which was a review of data for member-checking with participants at the end of each interview. As well, all interviews were transcribed as soon as they were conducted; field notes, journals,

documents, and artifacts were photocopied for ease and continuity of analysis, as well as confidentiality; and any email correspondence with participants was printed for coding purposes.

Data analysis included emergent coding of textual data collected during the study, as well as coding of data with specific descriptors identified by the three guided focus questions. The data analysis procedure used in this study is described by Erlandson et al. (1993) and consisted of the steps described below.

Step 1: Unitizing Textual Data

All text was unitized. Unitization is the process of identifying the smallest segment of text that represents an independent thought with reference to the research topic (Erlandson et al., 1993). Each textual unit was coded with labels that were identified as the descriptors of the thoughts contained within the segments. These descriptors emerged from the coding process and were not identified before coding began. Additionally, I coded with the descriptors identified from the three guiding focus questions as stated in chapter 1 of this study (e.g., individual definition of reflection, critical thinking, photographic process technique, and ways to reflect).

Step 2: Categorizing of Coded Descriptors

The coded labels were sorted into related categories, using the computer textual analysis program MAXQD10 from which emerged a categorization scheme. Cohen, Manion, and Morrison (2000) emphasized that “codes define categories; they are astringent, pulling together a wealth of material into some order and structure. They keep words as words; they maintain context specificity” (p. 148). An analysis of the individual

respondent's writings, photographs and interviews were also coded to reveal commonalities, which, in turn, provided additional categories for the findings.

Step 3: Emerging Themes

Similar categories were then grouped together so that relationships between the categories were identified. Themes, or the relationships between the categories identified during the process, became the findings of the study (Creswell, 2005). Table 2 provides a sample of how the coding and categorization process was completed and how themes emerged from the categories.

Efforts to Establish Trustworthiness

Peshkin (1993) characterized "the goodness of qualitative research" as "a type of research that gets to the bottom of things, that dwells on complexity, and that brings us very close to the phenomena we seek to illuminate" (p. 28). The researcher demonstrates this goodness of qualitative research by meeting certain criteria in the study design, procedures for data generation and analysis, and the construction of case reports that present the findings. These criteria, credibility, confirmability, and transferability assure that the study has been rigorously conducted, and that the findings are trustworthy.

Credibility

Credibility, in this instance, means that the determination of the findings was a co-construction between the participant and the researcher and this determination was established by member-checking. Member-checking assures that the interviews, triangulation of multiple data sources, input from peer debriefers as to the accuracy of themes generated from data, and the researcher's reflective journal notes are in sync (Erlandson et al., 1993).

Table 2

Sample of Data Analysis: Category Generalization

Theme	General coding categories	Key descriptor phrases	Example of units of data
Conceptualization shift	Changing perspective	Reflecting upon personal biases	I thought about veganism as being more about what I eat, but now I see it more as lifestyle choices
	Process of exercises	Thinking behind photographic exercises	It actually required planning... in order for me to actually reflect on this concept.
Individualized practice of reflection	Using critical thinking	Reflection on classroom practice	What, as a teacher, do I do in the classroom, just because it's ingrained in me?
	Reflection-on-action	Personal reflection on practice after exercises	I don't think I'll talk about the picture. Because I want them to see what kind of ideas they have.
Reflection provokes physical and emotional sensations	Reflection-in-action	Writing and critical thinking	It pushed me in a way that when I was writing, I had never communicated those thoughts necessarily.

To further ensure that the findings of the study were credible and allowed for confirmability, 2 peer debriefers reviewed the coding procedures. The development of resulting categories, in order to provide feedback as to the ideas, questions, and conclusions that were made in the study, were also checked by the peer debriefers. Peer debriefing “requires researchers that assemble arguments to support assertions and constitutes a critical check on the viability of what has been learned from a study” (Kelly & Lesh, 2000, p. 496). The 2 colleagues who served as peer debriefers were knowledgeable about the topic being discussed and the procedures being used in this study for data generation and thematic construction. They were chosen because they were currently employed as teachers, were published authors, and had graduated from a recognized teacher education program. These peer debriefers also reviewed the participant’s perceptions constructed from data by the researcher, in order to ensure that the case study reports presented the voices of the participants (Erlandson et al., 1993; Lincoln & Guba, 1985).

Triangulation, more so than other methods, offers a comprehensive means by which to apply the trustworthiness criteria. Triangulation consists of looking at the same phenomenon or research question from more than one source of evidence (Phillimore & Goodson, 2004) and provides a strong basis for cross-case analysis (Lincoln & Guba, 1993). For this study, multiple data sources were collected, including the “Researcher as Instrument” reflective statement, personal reflections from participants, my personal reflection journal, other artifacts, such as digital images taken during the study, as well as transcriptions of individual interviews.

Confirmability

Confirmability, the determination that the findings emerge from the data and that the interpretation of the perspectives included in the case study reports are those of the participants, rather than the expectations and projections of the researcher, is established by having the researcher state their own biases and expectations prior to the research in the “Researcher as Instrument” statement, as well as in the recording of the researcher’s comments, thoughts, and decisions in the researcher’s reflective journal, maintained throughout the data generation and analysis process (Erlandson et al., 1993). As noted earlier, the “Researcher as Instrument” statement I constructed before conducting the research is presented in Appendix A.

In addition, the use of peer debriefers to provide additional perspectives on the coding process, as well as the construction of the case reports, provides a means for illuminating biases that may have influenced the data analysis process and case report construction.

Transferability

Transferability, the application of the findings of the research to other contexts, situations, or populations, is the responsibility of the reader. In this type of qualitative study, the researcher included rich detail in the participants’ reports and documentation of the context for the reader, so that appropriate inferences can be drawn to the reader’s situations (Erlandson et al., 1993). Qualitative reports of individual participant cases provide readers with thick, rich descriptions of “the circumstances, meanings, intentions, strategies, motivations, and so on that characterize a particular episode” (Schwandt, 1997, p. 161). From these reports, the readers were able to judge the information and make

decisions regarding the applicability of the findings to their own situations. The reports were constructed with the help of the participants, so that the experiences, perceptions, and beliefs of the participants were fully described, regarding their use of the process of photography to inform their practice and personal education.

Trustworthiness

Trustworthiness is the key to successful qualitative research (Erlandson et al., 1993). Ensuring that the criteria of credibility, confirmability, and transferability were met demonstrated my commitment to these standards for valuing “the separate realities that have been created by individuals ... the way these realities are responded to and the ways in which they enable individuals to respond productively to their environments” (Schwandt, 1997, p. 132). My research procedures, including triangulation, peer debriefing, member-checking, the “Researcher as Instrument” statement, recording of research progress in my researcher’s journals, and the presentation of case reports provide rich, contextual background to inform the reader.

Ethical Considerations

The Brock University Research Ethics Board granted approval before this inquiry began. (A copy of the Ethics Clearance Certificate is presented in Appendix E.) Although there were no anticipated risks to participants, specific procedures were followed to ensure participants understood all risks and benefits of participating in the study, as well as the procedures used to maintain confidentiality of participant data collected during the study.

All potential participants were given a letter of invitation, which explained the purpose of the study and related procedures that would be used to maintain confidentiality.

The letter of invitation contained my telephone number and email address. Participants were asked to contact me if they were interested in participating. Participants' names and contact information (e.g., phone numbers, mailing and email addresses) were kept in my home office in a filing cabinet, which was accessible to no one.

At the scheduled initial meeting, the three participants in the study signed the Informed Consent Letter. These forms were carefully reviewed with each participant in order to ascertain if the forms were completely understood. I specifically reiterated that the participants were free to drop out of the study at any time without giving reason. Participants were informed that withdrawal could be done orally and/or in writing. It was made clear that there would be no unfavorable consequences should they choose to withdraw from the study. Also, I restated their right to decline to answer any questions, to refuse to take part in any area of the study, and to withdraw from this study at any time without penalty.

The procedures to be used during and after the study to protect confidentiality of participants was also explained to them, including the fact that all information participants provided was considered confidential, and their names were not included or, in any other way, associated with the data collected in the study. A pseudonym was given to each participant, and transcribers and typists were required to complete a confidentiality agreement before having access to any raw data. Additionally, names did not appear in any written record resulting from the study; however, with participant permission, anonymous quotations were used from data collected from journal reflections, follow-up interviews, transcriptions of meeting notes, and email correspondence. In addition, the journals and any artifacts from the participants were

treated as confidential in that they were secured throughout the research process. Audiotapes of interviews were labeled with pseudonyms, which were used during transcription. All data were kept in a locked storage cabinet in the researcher's office and will be professionally shredded within 2 years.

Limitations of Study

Time restrictions played a role in this study due to the end of the school semester. Time restrictions affected the ability of the participants to feel fully comfortable exploring feelings and emotions. Approximately 2 weeks were allowed for the participant's to complete the exercises.

Generalizations were not possible because of the sample size; however, this does not negate the findings that were gained from the participants and applied in their own teaching situations. Transferability is still possible because of purposive sampling.

CHAPTER FOUR: FINDINGS

This inquiry focused on the process of photography to determine if it could be used as an effective strategy for teachers' reflective practice and a means to enhance teachers' perceptions about their own professional learning.

Research Focus Questions

The overarching, broad guiding question for the inquiry was: How does the process of photography as a strategy for reflective practice enhance teachers' perceptions about their own professional learning? As well, within the boundaries of the overarching, broad guiding question, three research focus questions were used to guide and direct this inquiry. The phrase appended after each of the numbered research focus questions is a paraphrase of the focus question for readability and clarification. These paraphrases were then used to help categorize all three case study reports.

1. How do individual teachers define and describe reflective practice? [Individual Practice]
2. How do teachers who use critical thinking as part of the reflective process feel that it informs their professional learning? [Reflection to Inform Professional learning]
3. How is the process of photography a useful technique for teachers to enhance their own professional learning and to facilitate critical thinking? [Photographic Process as a Tool for Professional Learning]

Qualitative Case Study Reporting Mode

I have chosen to use a qualitative case study reporting mode because it is "an approach to research that facilitates exploration of a phenomenon within its context using

a variety of data sources” (Baxter & Jack, 2008, p. 544). My inquiry depends upon this type of multidimensional structure because “this ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood” (Baxter & Jack, 2008, p. 544).

Theoretical Underpinnings

Constructivist research is built upon the foundation of a collective or social construction of reality (Creswell, 2005). One of the benefits to this type of approach is that it allowed for the participants and the researcher or inquirer to work together to construct knowledge together (Creswell, 2005). This collaborative construction then became the building blocks with which the process allowed the participants to relate their stories in a rich and more profound manner. The researcher became the learner. It was anticipated that this type of co-construction would allow the participants, along with their individual stories, to be better understood by the researcher (Maykut & Morehouse, 1994).

Procedure Summary

Five teachers were approached to participate in this study. Two potential participants declined citing prior commitments, time constraints, and family obligations. Although they had similar teaching preparation backgrounds, the three teachers who agreed to participate in this study varied slightly in age, position within the professional teaching field, and level of formal teacher education.

The three participants were given a sketchbook to use as a reflective journal, and a set of three exercises to complete as described in detail in chapter 3. Initial meetings with each participant introduced the project, and/or described the exercises and how they were to record reflections in the sketchbook. Each participant was then scheduled for a

concluding interview that was recorded and transcribed.

Rich Narrative

In case study reporting mode within the framework of qualitative inquiry, “the researcher has an opportunity to provide many excerpts from the actual data that let the participants speak for themselves ... in word or action” (Maykut & Morehouse, 1994, p. 47). In doing so, it gives “the reader sufficient information for understanding the research outcomes” (p. 47). The three participant case reports follow; each beginning with an initial quote that summarizes each participant’s overall experience.

Brittany

Brittany offered the following summary statement during her interview: “Using the medium of photography allowed me to engage with my strengths and my emotions. It allowed me to have a physical process of learning, of picking up a camera, of using it, of using my eyes, and thinking.”

Brittany was an enthusiastic teacher who recently graduated from the teacher education program at a mid-sized university located in southern Ontario. During this study, she was completing her thesis in the Master of Education program, and her teaching position was working with children who are challenged in areas such as literacy development and reading comprehension. She was also teaching part-time as a university teaching assistant and did private reading tutoring.

Individual Practice

Brittany was introduced to reflection and reflective practice in the teacher education program she attended. She described the program as expecting their students to follow a certain philosophy of teaching, and that reflection, in her opinion, was

approached as a necessity to further this philosophy: “I don’t think that I would be wrong in saying that they’re trying to produce a particular type of teacher, and a particular type of student.”

Brittany recounted her experiences in one of her classes on teacher reflection as a thinking activity: “It was thinking about what you did, and think about how you could change it, it was *think, think, and think!*” She believed that the teacher education program in her university mostly prepared the students to be “skillful classroom managers, joined together with the ability to impart curriculum in a way that translates into student learning.” Furthermore, she explained that the teacher candidates were expected to grasp many of the conceptual understandings about teaching from just reading about it: “I saw it as here’s a book on reflection, here’s a book on classroom management.” She indicated that this was less than ideal for her learning style.

She described teacher reflection, as taught to her, as little more than an “exercise in mental gymnastics.” She further explained that she felt that “it was simply a mind activity” so that to be “completely honest, I never took reflection seriously.” She remembered pulling out her class binder the day before her marked classroom evaluations. Completing the reflection section of all the lesson plans for the lessons she had designed and taught was simply a matter of writing down every reflective thought she could quickly find. As she explained this, she leaned back in her chair and laughed as she pretended to write in her binder. “Billy was misbehaving ... next time I’ll do this and that ... I mean, because I couldn’t care less ... I didn’t think it actually had any impact.”

Reflection to Inform Professional Learning

Prior to participation in the study, Brittany had given little credibility to teacher reflection. Admittedly, she had not engaged in teacher reflection as a lesson planning tool. Therefore, she had no real opinion on how reflection could be used as a tool for planning lessons and its potential enhancement to her classroom practice. Her reluctance to practice reflection the way it was taught in the teacher education program was evident: “You would write a lesson plan, and you would teach that lesson plan and you had to reflect at the end, and honest to God, I never did it after that lesson.”

However, Brittany demonstrated her ability to critically reflect throughout our interview by describing the choices she made as a teacher and how her personal life was altered by those choices. For example, Brittany explained how she viewed herself as a teacher:

I think that a lot of the times we see it as separate—this is Brittany the teacher, and this is Brittany the person—but, it’s one ... teaching is part of who I am, and I bring that human aspect to it, so understanding how I interact in the world helps me to understand how I interact in the classroom. It’s not two separate worlds.

Brittany was enthusiastic about photography as a tool “both in the classroom, and just in terms of leisure or pleasure.” She particularly liked the experiences she had with exercise 1: “I think I’ll approach so many things differently, because I’ve had the experience of using the camera, and changing how I look at things.”

In exercise 1, the instructions were to choose an abstract concept and photograph an object, scene, or other representation of that abstraction. Abstract concepts were explained as subject matter that cannot be interpreted literally. The examples given were

wealth, happiness, and pollution.

Brittany indicated that “I think what was so important for me was that ... it was taking photos of abstract concept, I had never done that, and I had never thought of it in those terms.” Brittany had to change her thinking in order to complete the task.

I had to view it in a different way, and I would have never done that before, so it makes me think, what, as a teacher, do I do in the classroom? [Do I teach a certain way] because that’s the way I was treated as a student, or I learned as a student, or I learned in the teachers’ education program ... just because it’s ingrained in me?

Brittany’s use of critical reflection became evident with the first exercise of the study. The abstract concept of her choice was captivity. In order to portray captivity, she went to an animal sanctuary to photograph the animals—a place she had enjoyed as a child and visited often with her parents. This animal sanctuary held many wonderful memories for her, and she had taken photographs of the animals many times. Brittany was always careful to take pictures that hid the fences and cages. “When I go and take pictures, I purposely avoided the fences and the enclosures ... so that you see just the animals. I noticed that’s what my friends always do; we always take pictures.”

On this occasion she took many photographs of the animals from every point of view always thinking about her concept of captivity. She experimented with her camera by lying in the grass and hanging on top of a large unruly fence. She steadied herself and photographed them from above. She wanted to photograph the animals from many angles in order to show change perspective. This time, instead of aiming for “pretty photos” of animals, she attempted to photograph them through the wire fences and

peeking out of their locked cages. While she was photographing the animals, she began to see and feel the struggle, mess, and cruelty that sometimes exist in zoos. She began to see her childhood sanctuary for what it was, and not what she wished it to be. Her childhood animal sanctuary was a zoo.

This was extremely difficult for Brittany. She is vegan. She eats no animal products. Her views on animal rights are public knowledge. Brittany talked about her dismay at thinking she might be asked to compromise her vegan lifestyle or her beliefs in animal rights by attending a school trip that might include a circus or a zoo, or if she were asked to attend school functions which might include a roasted pig or a banquet serving veal:

Would I be able to say no and how would that influence my students knowing those views? This actually makes me stop and think about reflecting on how my vegan lifestyle would then influence me as a teacher, and what I do in a classroom. I never really thought of it that way.

Brittany continued by asking herself some very difficult questions: “Do I stay true to my values, and my views, which may be unpopular ... do I hide to play this teacher role?” She then began to reflect on her beliefs about the concept of teaching and being a teacher: “Do I allow this to erode an important aspect of my lifestyle?”

A visit to this animal sanctuary was a Thanksgiving tradition for her family. She had gone to this animal sanctuary for many years and had never thought of it as a zoo. Brittany related that after this experience at the animal sanctuary (zoo), her perspective changed. She began her visit to the sanctuary “thinking about the teaching and the learning aspects, what the students could learn from this exercise.” However, she explains that the exercise changed her own perceptions:

Based on my personal views, we [all] have our biases and our views, when you go into a classroom, [our biases] influence what you do, and how you teach ... what I've learned through this, because I'm actually reflecting on how that [the experience] would influence my practice as a teacher.

She explained that she should have paid more attention in the teachers' education program to the "everyday" and "should actually have paid attention to those little things that I was completely oblivious to."

Brittany concluded her reflection by stating, "It makes me realize that reflecting, and taking that active reflection, can be an uncomfortable process. You have to stop and do things in a different way." She added that when she applied this shifted way of thinking to her own teaching practices that she was "going to, perhaps, rethink a particular way your school does something and how that affects your classroom ... that can be an uncomfortable experience."

Photographic Process as a Tool for Professional Learning

Brittany believed that her experience with the photography exercises had a profound effect on how she perceived her own learning process, which, in turn, would influence how she teaches. She explained that she had noticed a shift in her perspective and provided an example: "I can take a really beautiful photograph, and think it looks great, and frame it, but the experience of learning [or seeing what she photographs in a new way] ... is more beautiful than any photograph that's in my journal." Brittany explained further:

Understanding that learning is a process and [that] learning happens for teachers outside of formal schooling, like picking up something like this [she gestures with

her sketchbook journal in one hand and a pen in the other] and doing an exercise like this, you learn a lot about yourself as a teacher. [She tossed the journal on the table and smiled triumphantly.] I've learned through experiencing something in a different format.

Brittany thought about how the idea of photographing an abstract concept translated into a new way of looking at abstraction in art: "Even when I look at other people's photography or modern art, I know I would look at it and think ... I don't get it, I don't see it." After the exercise, Brittany described looking at what the image represented, not just how aesthetically pleasing it was.

In exercise 2, the participants were asked to photograph a certain place or object of their own choosing from three different perspectives. They were asked to photograph their subject close-up, at a distance, and using different angles. Brittany transformed exercise 2 into an imaginative idea for her new classroom.

Brittany described how she could benefit from the use of a photographic process to decide the physical layout of her classroom. She would photograph her new classroom from the point of view of her students. Reflecting upon these photographs as well as her observations could determine what the children see when they sit at their desks. Brittany described her thought processes behind the exercise in this way:

Even the way I set up my classroom, stepping back and thinking about it ... even if I have a primary class, getting down, and taking photos from their height, and seeing. Where am I putting things on the wall? Do they have to look up at it? Is it overpowering them? Putting, perhaps bulletin boards lower to the ground, so it's at their eye-level.

Brittany felt that photography could “appeal to so many types of learners ... it’s not just about what you write on a piece of paper, or how you place on a test.”

Brittany described her reflective process that developed through the exercises as one in which she reflected by asking herself questions about what she saw, felt, and thought while she was photographing. For example, she asked the questions, “How can you show you are learning through photography? How can you show that you’re changing what you think about the world, and how you think about the world?” Then, she sought to answer her own questions. She answered her questions by identifying that this photographic experience helped her visualize ways she could “give those students the opportunity [to express themselves because] they may not be as strong at writing.”

This realization excited her, and she further explained that, “using the medium of photography allowed me to engage with my strengths and my emotions. It allowed me to have a physical process of learning, of picking up a camera, of using it, of using my eyes, and thinking.”

Brittany continued her questioning strategy with a different question: “What did I learn in my head from reading a book? ... What did I learn from experiencing something and how did that change how I see the world?” Her answer was that photography was conducive to a more physical form of learning: “I learned more about reflection in these three exercises than I learned in the teachers’ education program, because I engaged the body as well ... I changed physically.”

Brittany explained how exercise 3 helped her develop her reflective skills in a different way, through the written reflection that emerged from the photographic process. In this exercise, participants were asked to write one descriptive paragraph about a place

or object. They were then asked to photograph the subject of their paragraph. After reviewing the photographs, they were to reflect upon the experience and then rewrite their paragraph. Brittany confided that, “I don’t enjoy writing; I can admit that, so when I saw that I had to write a paragraph, I was sort of a little bit hesitant but I enjoyed the process.” Brittany’s first paragraph was as follows:

The front windowsill of my home is almost always home to my cat Whiskers. It is rare not to see him basking in the warm rays of sun that beam through the window. He often has to maneuver his way through a collection of eclectic figurines and various houseplants. The windowpane itself is marked with smudges from the birds that fly into the window. Through the window you can see the large maple tree in our front yard and the bird feeders that hang from its branches.

Brittany commented on her first draft (i.e., the above paragraph): “I think the one thing you’ll find when you look at my work is that my first paragraph is basic.” Again, she referred to her past training. “I’ve been trained to write academically to this point. I’m very used to writing point A, point B, point C ... this is the way I have always written.” In a soft voice, she whispered, “I can’t write with emotion, I just can’t do it!”

Brittany recounted her experience of photographing her front window after she had written the descriptive paragraph (see Figure 1). “I saw how my perspective changed. You can see it happening, you can feel it happening and I think that’s really important. The photographic aspect allows you to see it happening.”



Figure 1. Windowsill.

Brittany's rewritten descriptive paragraph is as follows:

The front windowsill of my home is almost always home to my cat Whiskers. It is rare not to see him basking in the warm rays of sun that beam through the window. Evidence of the cat's enjoyment of the window is everywhere—from the curtains covered in his orange and white fur to the birthday cards that are knocked over and scattered about. When perched in the windowsill, Whiskers often has to maneuver his way through a collection of eclectic figurines and various houseplants. To the right of the window are various snowman ornaments left long after the Christmas holidays. I wonder why they are still there. Have they been forgotten after the holidays, and now just blend in with the odd collection of items in the windowsill? Or are they enjoyed so much that they outlive the short holiday season? Also to be found is a Christmas angel figurine that finds herself tipped over and resting on brass candle holders. These candleholders too seem out of place being placed so close to the curtains—a dangerous fire hazard. Therefore, they must only be there for appearance, although the used candle and wax dripping suggest they were once enjoyed. Potted plants are scattered across the windowsill, featuring a variety of designs from painted sunflowers to plain terracotta. The plants themselves reach up for the sun despite the bite marks clearly from the cat. This windowsill offers the plants both a sunny haven and a predator ready to gnaw on them at any chance given. As you peer through the window your view is blocked by a long string of blue beads. Moving closer reveals that the beads have small white and black eyes painted on them. These beads are a souvenir from Greece and are meant to bring

good luck and scare away any evil spirits who may attempt to enter the home.

Looking past the beads, you notice that the windowpane itself is marked with smudges from the birds that fly into the window. The visible maple tree features many bird feeders that attract the birds to this yard, and eventually the window.

The design of the window allows for a panoramic view of the neighborhood.

Brittany smiled, “It’s not the best thing I’ve ever written, but especially one of my better pieces of writing and is more of an emotional piece of writing.” She realized that by “taking photographs and reflecting and thinking, I could write with emotion, so I almost wanted to give myself the personal challenge of trying poetry!”

Brittany credited the photography exercises, especially exercise 3, with helping her to become a little more aware by taking the “time to look at those things that we see every single day.” Brittany laughed as she talked about the windowsill as the home of her cat, Whiskers:

I interact with it every single day—but I never noticed any of the little things there. ... I never questioned why our Christmas ornaments are still there (it is April), or why do we have this ridiculous array of potted plants, and where did they come from?

Brittany thought in terms of “taking the time to look at those things we see every single day!” Brittany explained how these insights might translate to her classroom as a way for “students to be in the moment, and understand the moment.” She cautiously revealed:

I think ... it’s a little bit scary for me, when I look at this, and realize how much I don’t see in the everyday ... that I didn’t see ... I don’t see it, and that’s scary ... that really scares me ... that there’s so much in the everyday life that I just pass by.

In Brittany's reflective process, she added a new set of questions about how she approached her life as a teacher. She asked, "How am I not seeing my students, and what am I not seeing of their everyday experience?" Brittany confided, "I never thought of that [tendency to be results-driven] as influencing myself as a teacher and now I realize that it would." She contemplated:

Am I just focusing on that final result? Like you're focusing on the final photograph, and what does it look like? But what is that process I went through? Do I disregard that, because I'm so result focused? Being in the moment ... learning, this sort of revitalized that love of learning for me!

Adam

As Adam succinctly noted in his interview, "Ideas are what are missing!" Adam, an articulate, internationally educated entrepreneur, came to the teaching profession later in life, and his enthusiasm for teaching is apparent. Adam holds several advanced degrees, yet has never attended a university-level teacher education program. During the study, his students consisted of undergraduates enrolled in business classes at a mid-sized university in southern Ontario. Adam described a distinctive quality of his teaching style as the ability to successfully convey the implications of global economics and the environmental responsibilities that accompany globalization, from personal knowledge.

Individual Practice

Like many instructors that teach at the university level, Adam did not attend a recognized teacher education program. Although he utilized reflective practice within the classroom setting, he did not use the terminology that teachers use to describe their own reflective practice.

Adam, a recognized expert in his field of business, lectured at a local university for 5 years and served on many important committees that are vital to the university's economic base. He described how he used critical thinking to enhance and improve his own teaching practice as a process of gauging the effectiveness of his lectures mostly by the questions that students asked after class. Although he encouraged his students to ask questions in class, many often had specific personal interests and preferred to ask him questions after class, sometimes as the class gathered in the local coffee shop.

Adam demonstrated that he was dedicated to the well-being of his students, by describing how he was willing to try different strategies to enhance his students' learning so that instruction was relative to their generation: "It may sound strange, because I teach economics. I want to make the students realize that there's more to life and economics." For example, he described his use of photography in the classroom to get his students to reflect upon the different class topics. "I use photographs from the Great Depression, to show just how depressing the Great Depression was ... we looked at misery, economic misery." Adam then described how he might include photography with his lectures. "I don't talk about the picture, because I want to see what kind of ideas [the students] have."

As an example, Adam displayed a photograph of two cargo ships taken off the coast of South America heading in opposite directions—one coming into port loaded with cargo, the other leaving port with scarcely any cargo at all: "The magic of this photograph is that this boat ... is going towards the Americas and that one is going away from the Americas" (see Figure 2). Adam thought the photo suggested a number of possible scenarios to stimulate an exchange of ideas or a discussion about globalization, including building, financing, and repairing ships, controlling the dry docks in the country.

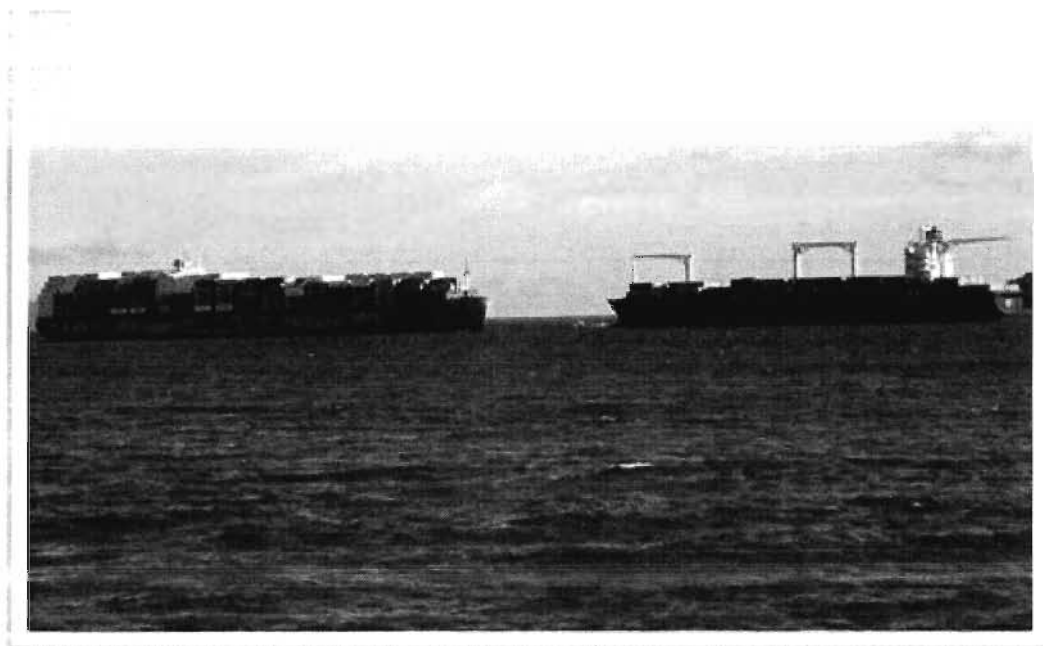


Figure 2. Globalization.

Adam credited the photographic exercises in the study as reminding him of a way to stimulate dialogue, find common ground, test the students' knowledge base, and pose different questions in his instruction.

We have got to ask the questions why ... or why not? Because they think they're too busy for that. And if you don't ask the students now, there will not be too many people down the road that will be asking these questions.

Reflection to Inform Professional Learning

Adam described his use of the reflective process to inform his professional learning as a matter of reviewing students' questions after class, in the privacy of his office or the local coffee shop, whatever the students prefer. He often examined the type and depth of student questions to determine the success of the course material as delivered and to make decisions on how he will handle the material for the next class. He explained that he is careful to take the time to see if he may have actually "inadvertently slipped a personal opinion in the lecture or maybe a bit of coloration."

Adam equated the summary he delivers at the end of each class to that of a lawyer in court presenting a closing argument: "I think about the way I build my argument ... was it not very strong? ... I thank God I was not a lawyer, I would've lost the case. At least in teaching, there is a next class!" Adam reflected that it is necessary to be effective because of "limited opportunities to share ideas, and to get critical elements across to the students."

Photographic Process as a Tool for Professional Practice

Adam described his experiences with the photographic process as providing him with two very important reflective aspects: as a method for expanding one's own view of

the world and a means of changing the way one thinks, especially the conceptual and the abstract.

Adam described the effect the photographic process had on expanding his worldview as “building a story” with the pictures. He added, “You sort of expand your horizons” because the process allowed him to use the camera to explore. He was free to explore in his own way, which he described as similar to a “play room” where, given the camera, “I had the camera and...I could go and play.” Adam was uncomfortable using his time to reflect using descriptive writing, and chose to work directly with the camera for all of the exercises, including exercise 3 which asked participants to write a descriptive paragraph, photograph, and then rewrite; therefore, his reflections were collected through interviews.

Adam’s summations of the ideas behind his thoughts on globalization were unique. Because he is an expert in globalization, teaching global economics and working with global businesses, the shift in his visualization of the concept of globalization was a result he had not expected from participation in this process. Adam chose globalization to photograph as his abstract concept, and described his thought processes as “I was meandering, and thinking, ‘What sort of picture am I going to give?’” He continued, “I was desperate because I chose an easy topic, I thought. Globalization ... I was going to take pictures of Volkswagens and Mercedes-Benz, Monsanto and all that kind of good stuff and ... that ... went off the rails.”

Adam further explained that something happened during the simple act of photographing a topic that was his area of expertise, and was surprised that the activity would lead to useful insights and a noticeable shift in his own perceptions of the topic.

Yet, when he was reviewing the photographs he had taken, he realized that he was thinking about his own views of globalization, and noticed a change. He described his view of the topic before exercise 1 as “goods and services; it’s about people trying to make a buck—selling stuff—especially value added products, patent protected products, like the Monsanto’s of the world.” However, as he completed the exercises for this study while he was on a business trip to a major port city in South America, something changed.

Carrying his camera, Adam decided to take a break from his meetings and walk to a local pub. This pub was located in a decaying district in the heart of the city. When he sat at the bar he ordered a drink and noticed a portrait hanging on the back wall:

The picture I ended up liking so much was in an old bar in the bad part of town ... and it had very old pictures on the wall of life in this historic city. This one struck me because it is of a little boy, smoking a cigar!

Adam’s photograph was of the far back wall in this old worn down bar. On that wall was the portrait of the young boy, laughing and smoking a cigar. The boy was about 8 years old and was wearing an old dirty cap, well-worn shorts, and shirt. It looked as if the boy has been working in the fields. The boy in the photo was grinning as he smoked his cigar and poses for the camera. Apparently, he was entertaining the other workers in the tobacco field. The photograph of the boy on the wall looked to be approximately 70 years old. Adam explained why this photograph was chosen for this study:

First of all, kids and smoking is like ... we cringe, but yet it was a picture ... it must’ve been someone’s joy and pride and this seems to be a cool thing for a kid

to be doing. But if you look at that, what struck me; while this is so politically incorrect ... little did I know that as I look a little bit closer ... I see this little sign. Adam described the old speaker system hanging in the corner. Underneath the speakers, “There is an old sign...saying ...Prohibido Fumar! (No Smoking!) in the corner surrounded by cobwebs and crooked little pictures everywhere.”

Adam continued:

It is like “don’t smoke” ... and then you have this [he gestures towards the portrait of the little boy smoking] ... the idea that smoking is bad for you is really a new concept. Because in the 30s, obviously, it was okay for you to smoke, even for 8-year-olds!

Adam explained the importance of the dichotomy symbolized by a little boy smoking a cigar and a small, crooked *no smoking* sign hanging in proximity to one another in an old run down bar in South America. Obviously, the health service in South America had not promoted the concept that smoking was harmful to health; yet, here was the sign, probably put there from programs or projects supported by North American firms working in the area. He stated:

When I saw the combination of those two; [I realized that] we have a global value system developing as well. Now this is a value system based on health science right? Smoking is bad for you. Therefore, smoking is banned in Canada; therefore, smoking is banned also in other countries.

Adam added, “Do you really think we would’ve seen that no smoking sign there if it had not been for the health lobby in North America? It is something [North American values] that trickles down to that [South American values].”

“Globalization then becomes more than buying and selling,” Adam quipped; “There is no one benefiting [financially] from the fact [that] ... smoking is bad for you. It’s not only globalization as in goods and services; it’s the globalization of health standards.”

Adam described becoming more aware of his surroundings on this trip as he took photographs for this study. Adam stated that he would still have taken the photograph of the boy smoking the cigar, because “it was a great shot; I thought it was the funniest thing,” but the process of reviewing the photographs through the globalization lens led to his discovery of “that little cobweb, covered no smoking sign hanging there!” Adam stated, “Had it not been for these exercises, I would never have noticed the small *no smoking* sign,” and further explained that this stimulated his own examination of how “our value system have become global.”

He explained that “globalization is admired by some and despised by many. And, as I am on the road a lot, and part of the globalization process, [so] I’ve seen the good part of it, but also the ugly part of it.” The photographic process had allowed him to document his own belief in globalization and why it is an important economic view.

Connie

“Photography and reflection, is something that we don’t do enough,” Connie said in her interview; “I wish I had the opportunity to do something like this when I was a student.” Connie, a young and committed teacher, had successfully completed a Master’s degree in education during the study. Connie was employed by a mid-sized university in southern Ontario and worked with a children’s literacy clinic operated within the faculty of education. She was sought after as a private tutor and mentor for children

experiencing learning challenges. She described her future plans as teaching in public schools and furthering her research career.

Individual Practice

Connie completed the teacher education program 3 years ago. Connie described her understanding of reflection as taught in the teacher education program: “I would say that when I was a concurrent student, we were encouraged in our teachers’ education program ... we were expected ... that we will be ... reflective practitioners ... always reflecting on our lessons or our strategy that we use.”

Connie confided that she never used the type of reflective practice that she learned in university. She did acknowledge that although she did not practice reflection as taught in her teacher education program, she did reflect in her own way. “I have seen myself reflect on how I handle situations in the classroom with students. I will think ... this student has a type of exceptionality, should I try that [strategy]?” She also reflected back to past situations for guidance. “You know, this is how I taught this course last year and what I did not like ... scrap it ... and then I use another approach.”

Connie defined reflection as how she performed in the delivery of a lesson or teaching a subject, not necessarily the content of the subject: “I can see myself reflecting on my own approaches. It is not about what I am teaching ... it’s not necessarily content ... it is more how I choose to deliver the content.” Connie explained that as a young teacher, much of her teaching was “trial and error” as “you would need to see what works with one group and what works with another.”

As well, Connie described her process of reflecting during lesson implementation. When Connie is working with students she has “sort of a bare-bones idea, of what I’m

going to say or how I am going to communicate to them, the big understanding, and to get the big ideas across to further that understanding.” However, she was comfortable enough in her ability as an educator to enjoy the spontaneity of her class and her students. She explained that she is not interested in preplanning her day per se “because sometimes, so many amazing ideas come into the session that you cannot predict, and so I just go with it ... and I’m very much ... when it comes to that I am very much myself.”

Reflection to Inform Professional Learning

Connie described a critical thinking process as the posing of questions, such as “What can I bring into this situation?” in order to gain insight into the circumstances she encountered in her classroom on a daily basis. In this respect, Connie believed that “sometimes combining a number of different strategies that I’ve used in the past making a new approach” is where critical thinking had informed her teaching practice in the past.

Connie referred to her beliefs about professional learning as the importance of bringing herself to the classroom “because I get more out of it, I can bring my own ideas, and what I think is valuable.” She learned by “aligning with the curriculum and the larger ideas that need to be presented; [and] at the same time I can get a good feel for what my group is about.” She, therefore, conducted her classes according to her personal belief system. “My personality is ... *I’m a person*, and I think that’s how I prefer to work with an idea and bring my own flair to it.”

Connie explained that she looked mostly for visual cues from her students while teaching to make conclusions about the level of student engagement and as a gauge for the effectiveness of her teaching. Connie described this process as a matter of assessing

the situation in the present, thinking quickly, and acting on it: “If they are engaged with the material they will remember it.”

Thinking critically about her own professional learning, Connie explained that she depended on past strategies to assess “what might work with which group of students.” Similar to Brittany, her reflective process included asking questions about the teaching situation, such as: “How do the students respond to me as an individual? Are they respectful? Are they disrespectful? Are they engaged? Are they interacting well with their peers?”

Photographic Process as a Tool for Professional Learning

Connie described how she began thinking about the photographic exercises for this study. “My first step was to have to think in a different way.” It was important for her to think through the process first. “It made me realize how important it is to reflect on different things that we do, and places that we go, even just reflecting on those experiences that we’ve had, and how they shape our perspectives.” Connie explained that after she had chosen what to photograph, it was not the process of photographing, but the photograph itself (product) that inspired her to write reflectively about the exercise. In doing this, she felt that she “got more meaning from [the process] because I never realized it [her subject] had such meaning—until I put those thoughts on paper.”

Connie described her reflective process as evolving. Her first idea for photographing an object from different perspectives was to photograph something in nature; however, “a tree for me, is still a tree! And you can look at it from so many ways ... the top to bottom etc., etc., ... but for me, what I see is a tree.” She did not feel comfortable writing about a tree. Connie added that she had “always thought that

photographs were memories ... the photos have memories and [the experiences depicted in the photos] are part of me from beginning to end, and made me who I am.”

Connie then chose to photograph the family photo albums that were neatly stacked in a prominent space on a shelf in her living room. (See Figure 3.) “It was a bit hard for me, but I thought they would be neat because I was looking for something that would convey my own point of view” while also reflecting her perspective that photos were the memories of many good times and lots of family history. The four photo albums that she had in her living room were there because of the different parts of her life they represent.

She noted: “One was my graduation album from the Faculty of Education ... and that was a really special moment for me.” She described how, just by looking at the stack of albums, memories will stir and she will think “this was a really great year in my life!”

She then described the photo album that held photos when she was a young girl from a time in her life when her family lived overseas. “Family is very important to me, so, with me not being at home ... if I ever feel lonely or homesick, I can just flip through it.”

The third photo album is from her days in university. “I have fun looking back and saying ... wow! I hated that haircut! What was I thinking?”

Connie reflected that the most important album to her was the brown one, “because it belonged to my dad ... these are black and white photos on very thin little brown paper, and it’s very, very beautiful. Whenever I get homesick or miss him, I just flip through it.”

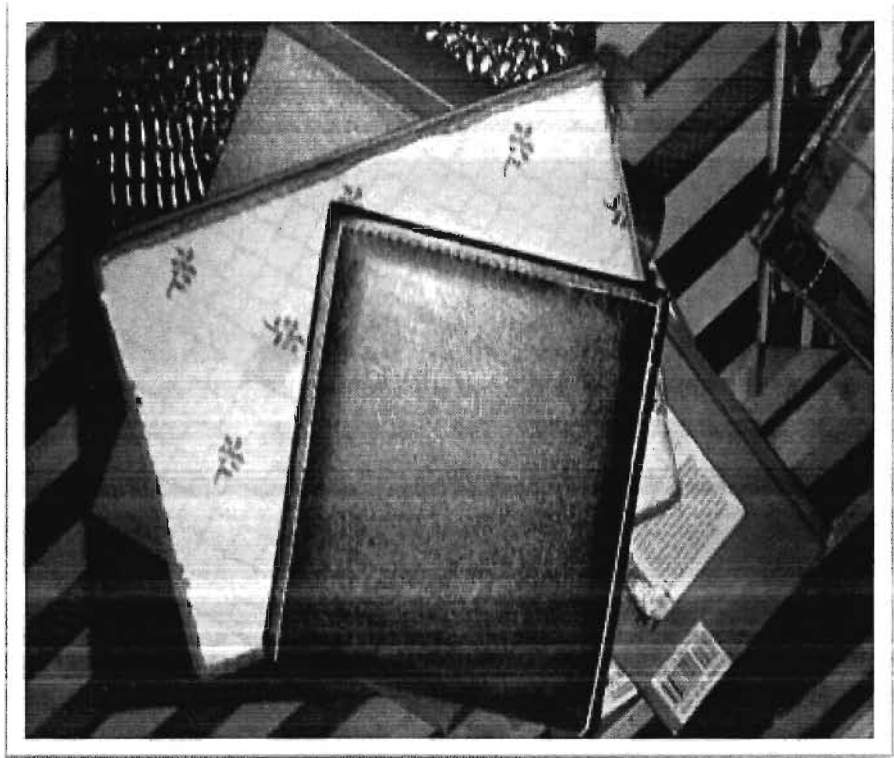


Figure 3. Photo albums.

Connie explained that she kept the photo albums stacked underneath her coffee table so she could “see it whenever I’m walking in through my bedroom, or sitting on the couch or I am in my living room so often and they’re available for me to see.”

Once she selected the albums as her topic, Connie positioned the albums in order to photograph them from “different angles, stacked up, from one side or the other ... I mean the angles; it did change how they looked. They’re pretty different in terms of perspective.” She made it clear that, to her, the process of taking the photographs is “just taking pictures.” Connie explained that it was the act of writing after the taking of pictures that led to her reflection, and being required to write “was more meaningful than the actual process [of taking the picture].” Because she wanted to articulate why she had chosen to photograph these albums for her journal, she explored her feelings by asking herself questions.

Connie explained her thoughts:

So, when I was thinking about these albums, I said, what is important to me?

What am I thinking about? I am thinking about, well, I pride myself on my accomplishments. I thought well ... OK ... that’s where my albums ... where my graduation is, how much I’ve grown, when I left home at 18, and now I’m here at 25 and thinking about, wow. ... I never expected to be here 7 years later doing what I have done.

She expressed her thoughts concerning certain photographs that were mounted in these albums. “For some reason, it was important [for me] to take *that* picture. Or, someone else did and gave the photo to me. So, it was a reflective process rather than the actual photography process that made me *see* these albums differently.” By having to articulate

her feelings as to why she chose the photo albums stimulated her thinking. She explained further:

It kind of pushed me. It pushed me in a way that when I was writing, I had never communicated those thoughts necessarily; I just never put it on paper because if you put it on paper ... then it is true, if you write it.

The emotions that arose from participating in these photographic exercises surprised Connie. This was evident when she explained that the photographs of her graduation from university, brought feelings of pride in all of her accomplishments. She described what it felt like for her to become a teacher, learning “life lessons” and becoming an adult. One entire album contained images from her childhood. Family vacations spent in Holland were of particular joy. She explained the pride she felt “to be a first generation Dutch Canadian.” Retaining all of the “traditions and customs within my family and the Dutch culture” are still of great importance to Connie. The most significant photo album to Connie was the one that held faded photographs of her late father’s “world travels when he worked on a boat.” Her father died when she was 8 and the “only memories of him are through pictures.”

I don’t remember what he sounds like, smells like, but pictures help me and are my only connection to what he looks like. People say I have his eyes and smile. I can’t remember, but I see it when I look through his album, especially one of him sitting at his school desk, which is cool since I love school, learning, and well, I am a teacher!

Through the process of photography Connie learned that she attached “meanings to things that I never thought would be as meaningful as they would be.” She attributed

her insights to the photographic process, which had stimulated her ability to express these feelings in her journal writings.

Connie suggested that the photographic process could be translated to her classroom “in a number of different areas to get students to think about different things ... [such as] world issues, their community, being a responsible citizen.” Connie elaborated:

And because, every kid knows how to take pictures, it could be a creative outlet. Maybe it would give them a confident boost, give them something they can play with, find out something about themselves and learn about themselves, especially in this day and age.

Connie explained her thoughts about using the photographic process as an important and insightful strategy for having the student “talk about their family history” and begins “a dialogue with students without necessarily forcing kids to sit down with you and talk about what is going on with them.” She explained that because family becomes a “very personal issue and they are not necessarily going to open up to you,” perhaps “photography might be an outlet to communicate what’s going on at home without actually saying it.” Connie concluded, “It is just a matter of how much a teacher is willing to take this risk. This activity itself, it pushed me, and I didn't realize that it would push me.”

Cross-Case Analysis

An inductive analysis of the three individual teachers featured in this inquiry revealed commonalities, which, in turn, provided an overall foundation upon which the findings are anchored. Inductive analysis, in this study, means the “patterns, themes and

categories emerged out of the data rather than being imposed on them prior to data collection and analysis” (LePage-Lees, 1997, p. 137).

A descriptive phrase was used to help identify the main threads that emerged from cross-case analysis of the three case-study reports. These commonalities are not meant as generalizations, yet their transferability may provide a pathway for future research endeavors.

Through the Photographic Process, Teacher Participants Developed New and Individual Strategies for Professional Learning

All three participants identified having individualized a personal strategy for reflective practice that fit their particular style of learning which could be adopted to enhance their teaching. Wald and Castleberry (2000) confirm, “the function of individual reflection is to inquire more deeply into one's self and one's actions” (p. 53). Individual teachers, themselves, have their own ideas, beliefs, and theories that can add to the betterment of their personal teaching practices (Zeichner & Liston, 1996).

The initial review of data indicated that all three participants viewed reflective practice in very different ways. Two of the three participants, Brittany and Connie, attended the same teacher education program. Although, they were both formally trained teachers and, as such, taught a specific method of reflective practice, their interviews indicated distinctly different ways of approaching reflective practice. They were both encouraged to form the habit of reflecting on their teaching practice before, during, and after the class, both felt that the skills they learned about how to reflect were not effective ways to enhance their own particular styles of professional learning. Connie explained that her reflective practice as a teacher, involved an “engaged self,” in which she judged

the actions of her teaching practice. It was important to Connie that she reflect upon her classroom practice as a product of her “own ideas, and what [she] think[s] is valuable” to the class. Her idea of reflection was to be concerned with her delivery of instruction, rather than on the *content* of what was to be instructed. For Connie, the process of photography helped to crystalize her writing. By photographing her subject matter, she was able to use the product (image) to “free” her writing. She then used the images to share her feelings in the interview process.

Brittany, on the other hand, explained that to her, reflection was “a process of thinking” about what had taken place inside the classroom after her class was over. Brittany’s reflective process was a sequence of “thinking” about the day, the class, and her practice. She agreed that this was an ineffective method for her. She never took the reflection process seriously, and viewed it as busywork. The photographic process was a physical process, involving the body in movement in order to acquire views of scenes to be photographed. Brittany recounted physically moving her body and shifting the position of the camera, all the while conscious of her surroundings: “I believe it is important to understand that our reflective practices can be ontologically and physically challenging.” Brittany stated,

Using the medium of photography allowed me to engage with those strengths, and engage with my emotions, and it allowed me to have a physical process of learning, of picking up that camera, of using it, of using my eyes, and thinking.

Brittany used the photographic process as a tool to help her understand more about herself and how she approaches her work. The interview process allowed her to articulate thoughts and feelings that had occurred during the exercises that led to

discoveries which were not revealed in her writing. For Brittany, the re-telling of the process of photography enhanced her professional learning.

Adam had no experience with the reflective process for enhancing teacher practice. Yet, he described his own technique of having students ask questions at the end of class. He could then surmise if his lecture content was effective by the questions being asked. He then reviewed his notes and structured his next class according to how much of the material delivered was understood.

When using the photographic process as a reflective tool, all participants believed that they engaged in a personal learning experience. Brittany shared

how this [the photographic process] has revitalized learning for me. I just got so immersed in it. I could see it happening, and you feel it happening, and that's what I think is really important about the photographic aspect of it.

Brittany elaborated that while engaged in the photographic process, she developed questions in her mind as she focused the camera lens. By asking herself questions about what she saw, felt, and thought while she was photographing, she would attempt to answer those questions based on what was happening in right in front of her. This was a new way of thinking as Brittany was "always focusing on results" or the end goal.

Connie also developed a set of questions that guided her reflection thinking; however, this process occurred *after* taking the photographs. Reviewing her images (the product) stimulated the questioning and answering process for Connie as she wrote in her journal. Writing helped her "to figure out problems, making sense of it" in her own way on her own terms. She explained that when she wrote her reflective pieces after the photographic exercises, "she had never [articulated] those thoughts necessarily. [The

writing] pushed me in a way.” Connie realized that in writing in her journal after the photographic exercises she experienced thoughts, emotions and feelings about certain things in her life that went much deeper than she was previously aware.

Adam was not comfortable with the written exercises. For him, the reflective process had been a progression of examining student questions, usually through individual conversation or group discussions. The photographic process, then, became an alternate method for thinking critically about topics in order to gain new insights by allowing him to focus on specific topics and look for examples of his resulting thoughts. During the study, Adam’s life was extremely busy. Traveling from meeting to meeting and then back to the classroom did not leave a great deal of time for “meandering,” as he puts it. Adam missed the study deadline. “You see, you made me struggle with this topic, with this project for 3 weeks!” He explained needing more time because he had not “taken the time to notice” anything to photograph. The reflective process that he developed through the photographic exercises was to critically think about the images that would be appropriate for his chosen topic. The physical searching for images and the moment of decision on what to capture with the camera helped Adam to rethink some of his beliefs and to formulate a new vision of globalization. Although he did not choose to write, he verbalized his thought processes as he shared the images during the interview.

The Process of Photography Led Teacher Participants to Experience Shifts in the Way They Conceptualized Their Personal Worldviews

All three participants expressed that they felt they had gained a greater awareness that provided a shift in their ways of thinking. They learned to see things in their life from a different perspective.

Brittany explained that being completely aware of her surroundings was not something that naturally occurred to her, “There’s so much in everyday life that I just do not see, in terms of personal reflection and as a teacher.” Brittany confided that it overwhelmed her to think about how much she did not notice during her day. She also wondered how much she missed of what occurred in her classroom on a given day: “I would not have thought about it that way [before the study].”

Brittany added that she was “very results-oriented,” and tended to view the outcome of the work that is of greatest importance. She explained that the way she conceptualized doing art work in the past had changed. Rather than focusing on making “my photo look good,” she was now “mindful of the moment” when doing the exercise—a “revolutionary” shift in awareness. As well, her new reflective process provided her with a strategy for viewing her teaching from a different perspective:

Now, rather than looking at the final outcome and wondering how does the student’s painting look ... I will have my students actually look at what they’re doing, and feel what they’re doing and engaging with how the paintbrush goes across the page.

Connie also described a shift in viewpoint when she recognized that her previous concept of photographic images as memories was a limited way to conceptualize images. She explained, “I’ve always thought of pictures as a memory of some sort ... I guess I never thought about objects resembling a big idea or evoking some sort of thought or a more symbolic concept.” Connie further explained that “trying to find a picture that may ... resemble relaxation ... was foreign.” Photographing an abstract concept of choice

(exercise 1) had made Connie aware that she had expanded her conceptual thinking through this questioning process.

During this study, Adam taught economics. As an expert in finance, his view on globalization before the study was that of goods/services and trade imbalances. However, Adam explained that his perception of globalization shifted during an evening walk in a South American city. He came across a new museum under construction and noticed that it was designed by the renowned architect, Frank Gehry. The shift occurred because he “bumped into Gehry.” “Is there a Gehry here, too?” he remembers thinking. “Gehry in Balboa ... Gehry in the States ... Gehry in the Czech Republic ... that’s when it struck me! Wow, that too, is globalization.” Adam realized that globalization was also the exchange of creativity, as well as goods/services and trade imbalances. The exchange came in the form of intellectual property and the materializing of that intellectual property. Adam explained that he had never considered globalization to extend beyond the exchange of goods and services. He attributed this expansion of his concept of globalization to having participated in the photographic exercises. He was surprised at what he had discovered. Adam was about ideas and he referred to it as “having stirred the pot,” when he described how he felt about the ideas that the photographic process generated for his classroom practice.

During the photographic process the teacher participants took “responsibility for personal values and beliefs ... [and] how to listen and lean into their own personal discomfort” (Grant, 1999, p. 170). All three participants indicated that there was a physical process which aided them in their shifts in perspective. Involving the body in movement in order to acquire the photos, views of scenes to be photographed and even

the physicality of writing in their journals aided awareness. Sometimes this awareness brought about feelings that were not comfortable. Brittany recounted physically moving her body and shifting the position of the camera, all the while conscious of her surroundings: “I believe it is important to understand what our reflective practices can be ontologically and physically challenging.” Brittany stated:

Using the medium of photography allowed me to engage with those strengths, and engage with my emotions, and it allowed me to have a physical process of learning, of picking up that camera, of using it, of using my eyes, and thinking.

Her individual stance allowed her to experience the process of photography through her body and through her own individual choices.

The physical act of looking for a photo opportunity that described Adam’s topic was required for him to complete his process. He explained, “You [must] give yourself time” to think and walk, and he felt that if he had not taken the time to complete these physical actions, he could not have formed valuable conclusions.

Connie articulated that perhaps reflection, even personal reflection, was uncomfortable: “It’s easier to pretend things are okay, put on a happy face and figure it out on my own terms based on what I believe to be right and true for me.” Connie was surprised that reflection was such a physical act for her as well. She explained that when she was faced with “concerns, dilemmas, questions, or stressors ... [a physical act, such as] cleaning, helps me clear my head, forget the problem momentarily, or even helps me piece it all together.” She found the physical writing component of the photographic process an effective tool for helping her make connections, and described it as an activity that “pushed me, and I didn’t realize that it would push me.”

CHARTER FIVE: SUMMARY, DISCUSSION, AND IMPLICATIONS

Chapter 5 provides a summary of the research and discussion of how the process of photography can assist teachers' professional learning, and also addresses implications for future research possibilities. These findings add to our understanding of the reflective process, and discuss implications for others outside the field of education.

Summary

The research focus of this inquiry was to determine if the process of photography as a strategy for reflective practice enhances teachers' perceptions about their own professional learning. Based on a constructivist platform, a qualitative research approach was used for this inquiry. Denzin (1997) explained that research methods should connect the reader, the participants, and the investigator for the purpose of expanding, rather than restricting, the connections to understanding emotions and curiosity.

Reflection is often explained as a strategy or plan of action in which educators explore their strengths and teaching skills (Hatton & Smith, 1995). Reflection allows teachers to explore their abilities to mentor of students and serve as a guide through content or information, and to act as a person of trust (Feldman & Greenberg, 2005). The reflective process enables teachers to examine personal biases and private prejudices in order to shed light on existing hindrances that forecast future problems (Connelly & Clandinin, 1988). Most importantly, reflection affords teachers an opportunity to refresh their teaching practice by finding new and inventive ways with which to judge these abilities and hindrances in order to avoid boredom (McIntosh, 2010).

The process of photography lends itself to this type of personal investigation (Miholic, 1998a). Reflective practice is a strategy for improving teacher practice because

it is a form of critical thinking (Miholic, 1998a). Reflection and critical thinking are transferable skills, which enable practitioners to understand themselves and others and to solve problems. Miholic (1998a, 1998b) positions critical thinking as the act of constructing, recognizing, and judging an idea which are the critical thinking skills also employed in the process of photography. The process of photography assists the person using the camera in “appreciating point-of-view; and weighing conclusions, inferences, and interpretations” (Miholic, 1998b, p. 111).

Reflection-in-action (Schön, 1983, 1987) guides the teacher’s in-the-moment decisions made in the classroom. Reflection-on-action is the process of reflecting on the moment-to-moment decisions that were made in the classroom. Schön’s description of the reflective process was very similar to the photographic process as described in Miholic’s (1998a) study, which pairs critical thinking and photography. The process of reflection and the process of photography rely on the practitioner’s ability to embrace the concepts and the willingness to employ new strategies (Miholic, 1998a).

I chose to position my inquiry by examining the effectiveness of the process of photography when used by teachers as a strategy for reflective practice to enhance their own professional learning. There was a need for investigating how the photographic process might be used to promote critical reflective thinking, for those populations where reflection is a familiar form for improving practice (e.g., for professional teachers, health professionals, adult learners, and professionals in the field of visual arts).

This inquiry was guided by one broad and overarching question: How does the process of photography as a strategy for reflective practice enhance teachers’ perceptions about their own professional learning? However, within the parameter of this overarching

question, three focus questions were then developed to further inform this study.

1. How do individual teachers define and describe reflective practice?
2. How do teachers who use critical thinking as part of the reflective process feel that it informs their professional learning?
3. How is the process of photography a useful technique for teachers to enhance their own professional learning and to facilitate critical thinking?

Qualitative methods were used to gather multiple data sources. These methods included purposeful sampling, inductive data analysis, emergent design, and negotiated outcomes. A case study reporting mode was used to interpret the participants' experiences with the camera. These reports provided a brief description of the participants and used the voices of the participants themselves to tell their stories. Findings emerged from the overall data analysis of each individual case report and cross-case analysis of these reports.

Discussion of Key Findings

Below, two key findings are discussed in depth referencing the context of the literature reviewed in chapter 2.

Key Finding 1

All three participants noted that through the photographic process, they developed new and individual strategies for conducting reflective practice which enhanced their own professional learning. As Hatton and Smith (1995) suggested, individual teachers are largely responsible to develop personal strategies to enhance their own professional learning. All three participants thought the photographic process was an effective strategy because it stimulated the development of new reflective strategies, which could

be individualized according to learning styles and preferences of the individuals.

Learning styles as used in this study “do not represent a set of abilities, but rather a set of preferences” (Sternberg & Grigorenko, 2001, p. 2).

In the beginning of this study, the three teacher participants indicated that they did not use reflective practice to enhance their own professional learning. All three participants were critical thinkers with very individualized styles of teaching. They also exhibited individual, personal ways in which they approached learning. All three participants experienced the process of photography in their own individual way, which accentuated their personal learning styles, and therefore, how they teach.

Brittany’s learning style was not conducive to learning reflective practice in a highly structured teacher education program. Brittany, a gifted swimmer, viewed reflection as taught as “an exercise in mental gymnastics.” Brittany stated that by using the camera to examine her surroundings required her to do more than think; she was required to physically move her body. Brittany used her physicality, which allowed her to conceive of a new way to approach her own learning. She came to understand that for her, a more “physical process of learning” added to her existing strategies of her own learning and broadened the way she perceived her own teaching. Reflection is cognitive in nature. Yet, it involves the workings of the mind, the feelings of the heart, and the discipline of the body (Feldman & Greenberg, 2005). This introspection led Brittany to consider photographing her classroom environment from the students’ perspective in order to experience how the students’ perceived their environment.

The photographic process allowed Brittany to develop a deeper self-understanding about how she, personally, learns. As an athlete, Brittany knew that she was a physical

learner. Yet, it was the catalyst of using the camera to physically investigate her surroundings that she realized the connection between her physical style of learning and the way in which she navigated through her daily environment. As Miholic (1998b) suggested, using the photographic process requires the photographer to weigh points of view, think about differing conclusions and to see things in a different way than one normally would. Brittany learned to use this connection to develop a better understanding of herself as a teacher. She was then able to transfer this understanding into new strategies for her classroom practice by changing the way she viewed herself as a teacher.

Gross and Shapiro (2001) describe how the process of photography can perhaps “raise awareness of how the making of images” can “consciously inform the making of our culture ... perhaps even ourselves” (p. 49). Adam said that by using the camera for the exercises, he had become more aware of different ways to present the topic of economics to his classes.

For Adam, professional learning was about the critical exchange of ideas. Dewey (1933) wrote about how ideas emerged from other ideas and that each “step from somewhere to somewhere else” leads the inquirer on a journey through the critical thought process to even more ideas (p. 2). Like Dewey (1933), Adam noted that when photographing for the exercises he was able to flesh out his ideas on certain subject matters, which would then produce even more ideas.

Adam commented upon the “limited opportunities” available to him to “share ideas” with his students. Working with “important ideas” and always asking “why or why not” informed his style of teaching. Adam believed that his success as a teacher

relied on being able to successfully convey the repercussions of not asking the “big questions.” As an expert in global economics the “big questions” that he wanted his students to explore were intimately tied to the “environmental responsibilities that accompany globalization.” Adam learned that the camera could be used as a tool to assist his teaching by opening up new avenues to present these ideas for the class discussions. For him, the reflective process had been a progression of examining students’ questions concerning the material covered in class lectures only to modify his next lecture. Adam raised his awareness by exploring his environment looking for images for this study. As a result he was able to develop a deeper meaning of *globalization* (exercise 1) than the one he previously held.

Adam incorporated what Hatton and Smith (1995) referred to as the third division of reflection, that being critical reflection. It is defined by its emphasis on values and knowledge and the idea of reflection as critical thinking being focused upon societal conditions emphasizing a greater good (Korthagen, 2001).

Dewey (1933) depicts reflection as a way of thinking about the “consecutive ordering of thoughts or ideas” which helps one come to conclusions and to weigh outcomes (p. 2). Connie knew from the beginning that she was going to “have to think in a different way” in order to complete the photographic exercises. She noted that it was an important process to reflect on the exercises first and then explore the when, where and how, types of questions.

For Connie, the experience of photographing was the opposite of Brittany’s experience. Connie’s choice of objects to photograph, her photo albums, held some importance for her. Yet, it was not the act of photographing these objects that led to her

discovery. It was the photograph of the albums that motivated her to write in her journal. She indicated that she did not realize the depth of her feelings until she wrote about them, until she “put those thoughts on paper.”

Hatton and Smith (1995) noted that by writing one’s thoughts in reflective journals were indicative of what they termed dialogic reflection. It is described as a form of discourse with one’s self. By reflecting on the image of the albums she was able to be free and “just go” with her writing. Although, reflective writing was taught as a strategy in her teacher education program, it was the impetus of photographing her beloved photo albums, taking the time to explore her feelings and then reflectively write that resonated with Connie.

As Roland (1995) argued, writing and thinking help develop the ability to write and think. Yet, the motivator for Connie to write was not the act of just jotting notes or descriptive writing. The motivator, as Maholic (1998b) described, can be attributed to the camera “as it serves to expose our thinking.” In Connie’s case, it was the product of the camera or the image that spurred her reflective writing. Maholic (1998b) goes on to speak of the depth to which we take our thinking reflects upon the awareness of what we see and how we see. By Connie exploring her feelings about the photo albums and what they represented to her, she was able to dig deeper through her writing. This reflective process sharpened her awareness of how she viewed the connection between writing, photographing and eventually her feelings about her family.

We must remember to make a distinction between the *process* (the act) of photography from the *product* (the image). It can be equated to the same difference as that made between the act of learning (process) and the act of expressing (product) that

learning (Gross & Shapiro, 2001). For example, in this study, although participants individualized their reflective strategies by adapting the photographic process to meet their learning styles, the reflective process of each included common elements: the decision process of selecting and making the image to satisfy the requirements of the activity, plus some form of sharing what was learned from the experience. The forms of sharing varied from participant to participant—one participant reflected orally while sharing the images, one reflected while physically engaging in the process of taking the photograph, and one reflected through the writing process that followed the making of the image; however, all participants were required to express what they learned from the experience. The inclusion of this component—sharing of experience—although different for different participants, may have influenced the quality of the reflection of each participant and the effectiveness of the photographic process to inform reflection. As with learning, perhaps the expression component of the reflective process, and how that experience is expressed, is an essential component of the photographic experience, and would be a consideration for future research on the use of photography as a reflective tool for professional learning.

Key Finding 2

The process of photography led all three participants to experience shifts in the way they conceptualized their personal worldviews. Naugle (2002) defines worldview as one's perception of the world. It is the lens from which one frames or views the world and what that means to individuals (Ivey, Ivey, & Simek-Downing, 1997).

Brittany expressed that her mind was usually focused on the tasks ahead and what had to be that day to complete those tasks. She mentioned that even while walking to her

classroom, that if asked, she could not have described her surroundings or remember if she had spoken to anyone. Yet, she could mentally recall everything on her to-do list with a moment's notice. Eisner (2008) points out that in our daily lives, a multiplicity of dimensions are experienced. These dimensions, which include the visual and the sensory, are worth investigating.

Brittany realized through working with the photographic exercises that her insights came by noticing the small things, the details in the objects she photographed. Brittany's internal self-dialog became more clear to her as she was photographing. Hatton and Smith (1995) would interpret her self-talk as a form of dialogical reflection. Brittany exhibited reflection-in-action which is Schön's (1983) suggested model for young and veteran teachers alike.

While Brittany was photographing, she talked about "noticing" being "aware" of minute details and feelings. In order to be a role model and mentor to her students she recounted, she would first have to pay attention to the "everyday" and to all of "those little things that [she] was completely oblivious to." She spoke of her personal views and how they influenced her teaching. Brittany learned that being "strictly results driven" is perhaps not in her best interest as a person and a teacher. She surmised that when doing the photographic exercises she was "in the moment" which was a "revolutionary" shift in her awareness. Evaluating and examining values and assumptions plays a large part in a teacher's abilities to take on leadership roles in order to make their community a better place to teach and learn (Zeichner & Liston, 1996).

Adam stated that it was with the aid of the camera that his ability to notice his surroundings became clearer. Usually preoccupied with thoughts about business, he gave

himself permission to go and “just play” for a while, looking for photographs to take. He exclaimed that “had it not been for these exercises,” he would “not have noticed many of these things” on his trip.

During his “play” with the camera, Adam recounted that he noticed gas prices in South America were about the same, yet, he noticed a “pineapple farmer selling his fruit for a dollar a piece!” The market place according to “value systems” occupied his mind as he wandered the streets. He finally went into a pub where he took the photograph of the little boy smoking the cigar as mentioned in chapter 4. This is where he noticed the small cobwebbed covered sign in the corner of the bar stating in Spanish *Prohibido Fumar!* (No Smoking!). This was the moment he began to work on the premise of how “value systems become global.”

Connie described a shift in the way she viewed herself and her sense of home. Her native home was several hours north of where she attended university. When asked to write a descriptive paragraph about a place or thing (exercise 3), Connie knew what she wanted to write about. After the initial paragraph she then went to photograph her subject and then rewrote the paragraph this time, with the photo in hand. She chose to photograph the skyline of the city where she had attended university. Her first paragraph depicted her new city in rather bland terms, describing some of the buildings she remembered that she liked. After the first draft, she went to a special place within the university where she had spent a great deal of time. She took the photograph from the 10th floor of the library, overlooking the view of her new city. She concentrated on the view of her city from the same window that she used to spend hours by as a student. After taking the photograph she then began to rewrite the paragraph. She said it was at

that moment, having the photograph in front of her, that she realized that this city was now her home. (See Appendix D.) She had never articulated those thoughts before—not even to herself. It is in the personalizing of meaning and context, the exploration of language, ideas and thoughts, drawings and writing that you know who you are (Roland, 1995). Connie articulated that the actual photographing meant nothing to her. The physicality of pen to paper plus the product of photography, the picture, worked for Connie. Miholic (1998a, 1998b) discusses photography's role as strategy to enhance professional learning through introspection. Connie's introspection was one of noticing discomfort and moving beyond preconceived limitations. Connie explained that she did not realize these exercises would test her, emotionally.

Implications

Listed below are several implications for teachers' reflective practice as well as implication for further research. These suggestions are by no means exhaustive; rather, they represent a starting point in order to inform the future endeavors of teachers and researchers.

Implications for Practice

The goal of this section is to present the implications for practice in order to advance teachers' reflective practice. The process of photography as a strategy to enhance teacher reflection is innovative where findings suggest:

- The photographic process was effective for these participants; therefore, it provides teachers with an important reflective strategy in order to enhance their practice.

- The photographic process in this study was adapted from a student population to a teacher population. It enhanced the participants' own reflective practice as well as informed their personal learning strategies. Therefore, applying it to other populations, such as populations at risk, may prove to be advantageous.
- The photographic process in this study was performed by teachers who are not professional photographers; therefore, teachers who wish to learn to use photography as a reflective tool could use these exercises to further existing classroom strategies as well as enhance their personal learning.

Implications for Further Research

The goal of this section is to make recommendations to further this inquiry. The process of photography as strategy to enhance teacher reflection is innovative where findings suggest:

- Expanding the written components to include several pieces of descriptive and reflective writing would allow the participants to explore a greater depth of this process. This would allow for differences in language, writing styles, and even creative expression to further inform the study.
- Building a longitudinal study has several advantages; “antecedents can be distinguished from consequences, consistent trends can be distinguished from temporary fluctuations, retrospective distortion is minimized” (Palmore, 1981, p. 7). Research over the last 3 decades has focused primarily on the structure and development of college students' ontological belief system (Schraw and Olafson, 2002). Most studies classify teachers as endorsing a particular epistemological worldview based on the research done on students. It is important to differentiate

between views of students and views of teachers. Therefore a longitudinal study can be of benefit (Schraw & Olafson, 2008).

- Allowing the participants to complete the photographic exercises in a professional studio environment would be helpful. By providing a closed environment where observation becomes a key factor could be informative and it would also allow the participants a unique experience which will enhance their learning practice. Additional benefits of these observations are that they can be conducted as an additional form of triangulation.
- The participants preferred different methods of communicating their experiences with the photographic process as a form of enhancing professional learning; however, the process included two common components: the decision process of selecting and making the image to satisfy the requirements of the activity, plus some form of sharing what was learned from the experience. Although the sharing of experiences was common to all participants, there was no data collected to show how this sharing process affected the participants' perceptions of the reflective process of photography. Future research that explores how the sharing process and different forms of sharing influence the effectiveness of the photographic process for reflective professional learning is warranted.

Concluding Remarks

Photographer Dorteia Lange was one of the first and most prolific women of any generation to ever pick up a camera. She noted that to think visually, "seeing in my mind's eye" was the only way she knew to explain how her mind works (as cited in

Acker, 2004, p. 12). She continues: “The camera is an instrument that teaches people how to see ... without a camera” (as cited in Acker, 2004, p. 12).

As a photographer, I know there is something inherently special about the camera and the act of photographing. One might ask, “Who am I to make such a statement? Who am I referencing?” I would answer—me. I have lived this experience. Actually, if the truth be known, I am troubled, much as how Dillow (2009) notes that “I am troubled by the impossibility of producing an objective, neutral view of a lived experience” (p. 10). As Palmer (1998) suggested, we teach who we are, and if we are going to teach who we are, we had better know who we are. Reflective practice is a necessary component for the lifelong enhancement of the individual teacher. It is only one component, yet it plays a role in each process that is important for learning to see the world in diverse ways

In order to make the connection between teacher reflection and the process of photography, the participants in this study had to, as the expression goes, see it to believe it. Learning new ways to practice familiar skills, remembering to think critically, and the sustaining of a refreshed reflective practice are strategies that should be the tenets of the veteran educator. The veteran educator then can become the underpinning structure, based on mentorship and professional development, through which the newly trained teacher can help to move the teaching profession forward, especially in the processes of reflective practice.

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Appendix A

“Researcher as Instrument” Reflective Statement

“Bass fishing!” my brother shrieked. “Bass fishing works for me. I find it relaxing, and I can reflect upon my day while I am out on the water. Fishing...just go fishing!” Great! I thought. Everyone is a critic.

Why Photography?

Sitting across the desk from one of my favorite professors at university, I feel myself starting to slide out of my chair. If I crawled under the desk and out the door, would he notice? As a graduate student, I must prepare for intense discursive engagements concerning my impending thesis, yet, now is not the time!

“Why not painting? Why not drawing, sewing, cooking...the act of doing, isn’t that it? Isn’t that what you are trying to point out?”

I smiled and said that I believed the process of photography lends itself in a very unique way, perhaps in a superior way to the act of teacher reflection. The camera’s immediacy and accessibility are virtually unparalleled.

“Sorry, don’t mean to shoot your idea out of the water. You will find opposition in researching your topic. You better back up and look at this again. How does this fit with education theory? That is a very important part of this equation.”

“Photography is unique in this particular application,” I argued aloud.

“So say you...it does not follow reason that photography is any better or worse than other pastimes that allows thinking room for reflecting.”

He smiled as he reached in his pocket shuffling for his office keys while not so subtly indicating that this conversation had come to an end. I nodded, thanked him

profusely as I backed out of his office, stumbling over the door jam. I felt a mixture of pure excitement and downright motion sickness as I left his office. What am I going to do now, I thought, as I quickly ran to the grad lounge and hid.

Kicking off my shoes, I plopped myself onto a sad looking sofa. Sinking rapidly into its folds, I reached for the lukewarm coffee that I had meticulously nursed during the meeting. I sighed. I longed for my couch, a hot cup of coffee and Louie, my faithful companion. While I am wishing, I thought; why not wish for an old black and white movie, popcorn and permission to stop the world from turning? Now, that would be nice.

Wait a minute! I grinned as I gulped the last bit of stale coffee.

I know... what I know... I thought. I will construct the scenario myself. I will present the studies that I've discovered and well, let the cards fall where they may. Isn't that what they say? As for the actual thesis, I will cross that bridge when the time comes. The time is here, now.

This work represents a great deal of time and collaboration. My only hope is that the time dedicated to this inquiry was worth it. I believe it was.

I Am a Photographer

My personal experiences as a working photographer have led me to Beijing and beyond. These experiences have been exciting and even challenging at times.

I have photographed the rich and famous, as well as the destruction and healing of 9/11. Travel has been the most rewarding. In southern Mississippi I spent weeks wrestling with the question of how to document abstract concepts such as juxtaposing racism and Christianity. How do as they coexist in the heart of Deep South? How do they coexist anywhere?

The inherent beauty of qualitative inquiry is that it allows the freedom of voice and movement to exist in a solid, yet fluid framework. Metaphorically speaking, this describes my personal, as well as my professional life. My goals as a person, partner, photographer, writer and researcher have been facilitated by the belief that self-discovery is possible through the arts; specifically, the photographic arts.

My quest began years ago. What do I have to offer the world? This was the question that constantly nagged and haunted me. I believe in giving back, I believe in helping people, and I always believed I would find what it is in this life that I am supposed to do. I trust now, my search has at begun in earnest.

At the heart of my future studies lies the *process* of the photographic arts as a vehicle that can be used on a journey towards self-discovery. Exploring the *practice* of photography as the structure that underpins this *process* is the essence. Investigating the *product* of photography as a medium for mutual dialogue then becomes a strong motivating factor. Photography is democratic, assessable and anyone can work within the parameters of using conscious camera work as a tool for self-reflection. My future research will explore ways in which the practice, process and product of the photographic arts assists others in personal, self-discovery.

The Dance



I was sitting on the back deck of my brother's home in Athens, Texas. It was cool and damp and the lake was calm. I noticed three large turkey vultures had taken up roost on my brother's boat house. With camera in hand I quickly scampered down the rickety wooden steps. Taking aim, I took a quick snapshot. Minutes pasted. Relaxing my grip on the camera lens I began to observe the "dance"

of these large, rather unattractive, magnificent birds. In my enthusiasm I stepped three feet to my right and pointed my lens towards the birds. The sun was brighter and my point of view was significantly different. As I continued to enjoy the interaction with my newly found "friends" I felt at peace. By shifting my perspective I was able to photograph the dance between these creatures. In *consciously* photographing the birds, I was able to *see*. It is because of this change in perspective both physically and mentally that I too was able to join in the dance.

Terry Trzecak

Appendix B

A Critical Checklist for Purpose, Point of View and Interpretation (Miholic, 1998a)

Purpose

- What was your purpose in this camera project?
- What were your questions at issue?
- What was the central question?
- What concepts did you consider in choosing your subject?
- What concept or topic does your photograph represent?
- What information present in your photographs specifically supports the concept?
- What assumptions did you make about your topic before you took pictures?

Point of view

- What was your initial point of view concerning this concept?
- From what point-of-view have you photographed the concept?

Interpretation

- How accurately did the camera capture the image you sought to record?
- Did it distort?
- Did it reveal hidden values?

Appendix C

A Critical Checklist for Re-examination and Revision (Miholic, 1998b)

The Thing Itself

- What is your rationale for choosing the subject?
- Does your composition convey the subject in a unique way?
- How accurately did the camera capture the image you sought to record?
- If there is a difference between your intent (how you wanted the composition to be read) and the image recorded?
- How well does your writing represent the concept or subject under investigation?

Vantage Point

- What is the point of view of your position?
- Does the point of view of the essay shift?
- From what physical point did you study and record your perception?
- Are there limitations or advantages to that point of view?

Focal Point

- Is the image/argument "balanced"?
- Where is the reader's eye drawn to in the composition?
- Is any section in the composition more appealing than other sections?
- Does the focal point influence the tone of the composition?

The Frame

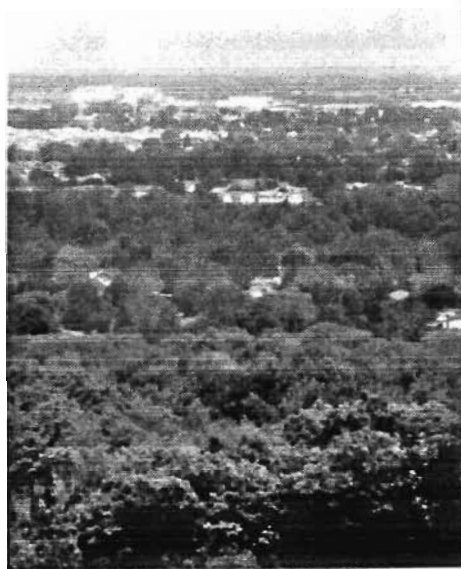
- How much context is provided?
- What are the boundaries of your thesis?
- What is present and what is missing in the image?
- Should the composition reflect what is not seen?
- What exists outside the edge of your thesis/composition?
- Where can the composition be improved through an enlarged scope?
- In repeating the assignment, would the focus, vantage point, depth of field, or framing change?

Depth of Field

- What details are not included? Is the thesis/subject in clear focus?
- Are more vivid details or ideas necessary? Are all details included necessary?
- Where would added detail improve the composition?
- To what extent can one generalize from your perception? Discern or infer ideas?
- Does your record intentionally or unintentionally distort or exaggerate the real?

Time

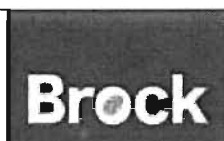
- When was the subject observed?
- Does time influence how the subject can be perceived?
- Does time influence the truth of the written record?

Appendix D**Connie's Home**

"home sweet home"

Appendix E

Research Ethics Board Clearance Letter



Brock University
Research Ethics Board
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Certificate of Ethics Clearance for Human Participant Research

DATE: 5/25/2011
PRINCIPAL INVESTIGATOR: KOMPF, Michael - Education
FILE: 10-256 - KOMPF
TYPE: Masters Thesis Project STUDENT: Terry Trzcek
SUPERVISOR: Michael Kompf
TITLE: Reflection Reframed: Photography as Strategy for Teachers' Reflective Practice

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW

Expiry Date: 5/31/2012

The Brock University Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 5/25/2011 to 5/31/2012.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 5/31/2012. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page.

In addition, throughout your research, you must report promptly to the REB:

- a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study
- b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
- c) New information that may adversely affect the safety of the participants or the conduct of the study;
- d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Michelle McGinn, Chair
Research Ethics Board (REB)

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.